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THE UNIVERSITY OF ALBERTA

TEACHERS OF HOME ECONOMICS PERCEPTIONS OF TEACHING TECHNIQUES

by

© LAURA MARGARET MANN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

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FALL, 1977

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "Teachers of Home Economics Perceptions of Teaching Techniques"

submitted by Laura Margaret Mann

in partial fulfilment of the requirements for the degree of Master of Education

Supervisor

Date October 12, 1977

ABSTRACT

A revised Home Economics curriculum was introduced into Alberta schools in 1972. The teaching method was changed from a subject-centered approach to a student-centered approach by the application of general concepts to specific student needs. The curriculum guide and accompanying handbook incorporated suggestions for at least twenty-six different teaching techniques which could be used by Home Economics teachers.

For this study an instrument was developed in a modified Likert format to determine the perceptions of Home Economics teachers as to how they teach and how they are expected to teach Home Economics as outlined in the curriculum guide and handbook. Specifically, background characteristics of teachers and their schools were compared with teaching techniques used. The instrument was pretested on a representative group of teachers. The instrument was revised and mailed to a random sample of 132 Home Economics teachers in Alberta. Data obtained from the 84 (63.6%) respondents were submitted for computer analyses.

Most teachers used higher order questioning, individual study, problem solving, teacher given demonstrations and laboratory work often. skits, pantomimes and music were most often never used.

Background variables of years of training, years since qualifying for teacher certification, years of teaching experience, years since courses were taken for credit, and whether the school was in a rural or urban setting were not statistically significant factors ($p \leq .05$) in the use of teaching techniques.

The teacher background characteristic of area of university specialization made a statistically significant difference in the use of written reports and problem solving. Membership in professional organizations made a difference in the use of interviews.

School background characteristics were significant in the use of teacher given demonstrations, use of resource persons, interviews, laboratory work, T.V. programming, use of VTR or TV equipment, symposia, role playing, written reports and skits.

There was no statistically significant difference between the perceived emphasis in the curriculum guide and handbook on the twenty-six teaching techniques and the teacher background characteristics of years of training beyond high school, years since qualifying for teacher certification, and years since courses were taken for credit. There was also no difference between perceived emphasis and school background characteristics of location of school, yearly or semestered program, or class size.

Teacher background characteristics made a statistically significant difference in their perception of emphasis in the curriculum of the use of pantomimes, T.V. programming, case studies and student given demonstrations. School background characteristics made a statistically significant difference in the perceived emphasis on written reports and role playing.

Pearson product moment correlations between use of the teaching techniques and perceived emphasis were relatively low, ranging from .102 to .686. Possible explanations for these correlations lie in school and teacher background characteristics. Written

comments focused primarily on lack of time and financial resources as reasons for discrepancies.

On the basis of this research it was recommended that school principals and the Alberta Department of Education give emphasis to those factors propitious to the implementation of the curriculum. It was suggested that the Faculty of Education give more emphasis to the understanding by students of the use of spiralling concepts and the development of some measure of expertise in the teaching techniques used most often by Alberta teachers.

Further revision of the curriculum should include increased consideration of appropriateness of techniques for the different levels taught. It was recommended that teachers of Home Economics implement new teaching techniques where possible to alleviate problems related to lack of resources, class loads and lack of time. Membership in professional organizations and increased interaction with fellow staff members was encouraged.

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A project of this nature, when assumed by a family member, requires the cooperation of all members of that family. Consequently I would like to thank my husband, Dennis Mann, whose faith in my ability and whose encouragement has sustained me throughout my studies. I would also like to thank my children, Jay, Darien and Joseph who have shared in home and family responsibilities to facilitate my studies.

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CHAPTER I

INTRODUCTION

A new Home Economics curriculum was introduced into Alberta schools in 1972. The scope and content were substantially more comprehensive than the previous curriculum. Specifically, the teaching method was changed from a subject-centered approach to a student-centered approach by the application of general concepts to specific student needs. While the concepts remained constant, the onus was on the teacher to formulate objectives and learning experiences pertinent to student needs. The curriculum content was rearranged giving recognition to a third dimension, that of Modern Living. Foods and Nutrition became Food Science, and Sewing became Clothing and Textiles.

For this study an instrument was developed to determine the perceptions of Home Economics teachers as to how they teach and how they are expected to teach Home Economics as outlined in the new curriculum. Provision was made for recording the reasons for any discrepancies between how they taught and how they were expected to teach.

A random sample of teachers of Home Economics in Alberta was polled.

STATEMENT OF THE PROBLEM

In this study the perceptions of Home Economics teachers in the province of Alberta were examined with respect to:

(a) How they teach Home Economics and

(b) How they believe they are expected to teach Home Economics.

More specifically, for the three subject areas in Home Economics; Food Science, Clothing and Textiles, and Modern Living:

1. How do teachers of Home Economics perceive themselves as teaching, that is, what techniques do they use?
2. How do teachers of Home Economics perceive that the curriculum and Handbook indicate they should teach?
3. What reasons are indicated to account for differences between 1 and 2 (if any)?

SIGNIFICANCE OF THE STUDY

The University of Alberta is the only post-secondary educational institution in Alberta offering Home Economics teacher education. The majority of Home Economics teachers in Alberta are University of Alberta graduates. Entry level to the University of Alberta is clearly set. People may become teachers by completing the four year Bachelor of Education program with a major in Home Economics, or by earning a Bachelor of Science degree in Home Economics followed by the requirements for teacher certification. Of interest is the extent to which the courses in the University of Alberta Bachelor of Education and Bachelor of Science (Home Economics) programs are meeting the needs for teaching of the Home Economics curriculum.

The curriculum, established in 1971, was given to Alberta teachers in 1972 and was to be fully implemented in 1974. Indications were in 1977 that not all Home Economics teachers were following the new curriculum. Two contributing factors may have been either that the

curriculum was inadequate or the training of teachers was inadequate. Decisions regarding teacher education are made at the University level. These decisions could be supported and improved upon with data from the field. Findings might have direct input into Curriculum and Instruction courses, counselling of students, and subject matter specifications. Prior to this study, research in this subject area had not been done at the University of Alberta.

RATIONALE FOR AN ASSESSMENT OF THIS NATURE IN AN EDUCATION ADMINISTRATION PROGRAM

Administrative decisions are made on the basis of observed and inferred behaviors. The most effective decisions made are those made on the basis of the most information available. Educational decisions should include teacher perceptions. It is not sufficient to supply suggestions for teaching techniques in the form of a guide and a Handbook and assume that the information will be used. Communication between the theoretical planners and the 'real world' is necessary. Feedback from teachers in the field should supply relevant information with respect to the effectiveness, plausibility, usefulness and appropriateness of suggested teaching techniques.

ASSUMPTIONS

For the purpose of this thesis it is assumed that:

1. The sample was representative of the teachers of Home Economics in Alberta.
2. The instrument measured teacher perceptions of how they taught and how they were expected to teach.

3. The teachers in the sample will have provided an accurate record of their perceptions.

DELIMITATIONS

This thesis is delimited to the application of an instrument devised to measure the perceptions of teachers of Home Economics in Alberta as to how they teach and how they are expected to teach.

No attempt has been made to evaluate the effectiveness of the teaching methods used, nor was an attempt made to evaluate the Home Economics curriculum.

LIMITATIONS

The value of the study was limited by the degree to which the instrument reflected the perceptions of the teachers.

EXPLICATION OF SPECIAL TERMS OR DEFINITIONS

Concept

As used in this thesis a concept is an abstraction. It is an idea generalized from particular cases, a word or phrase which denotes a category of information or simply an understanding or notion of some thing, some person, some idea.

Clothing and Textiles

Clothing and Textiles is the name of one of the three main divisions in the Home Economics Curriculum. It includes a group of three main concepts; Significance of Clothing and Textiles to the Individual and Society, The Nature of

Clothing and Textiles, and The Acquisition and Use of Clothing and Textiles.

Food Science

Food Science is the name of one of the three main divisions in the Home Economics curriculum. It includes a group of three major concepts; The Significance of Food, The Nature of Food, and The Provision of Food.

Home Economics

"Home Economics is a study of the laws, conditions, principles and ideals concerned with people's immediate physical environment, and their nature as social beings, and especially the relationship between the two for the purpose of improving the quality of people's daily lives."[1]

Modern Living

Modern Living is the name of one of the three main divisions in the Home Economics Curriculum. It includes three major concepts; Human Development and the Family, Management, and Housing.

Perception

As used in this thesis, perception refers to the process by which one attributes significance to his immediate environmental

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[1]The definition of Home Economics was reworded at the Lake Placid Conference in 1973. The University of Alberta Home Economics Faculty altered the wording slightly and adopted the following definition when they conducted their Aims and Objectives study in 1974-75.

situation as it is influenced by factors in the perceiver and factors in the environment.

Teachers of Home Economics

For this study, teachers of Home Economics include all teachers teaching Home Economics courses in the Province of Alberta.

Summary

This chapter has provided a basis for understanding the nature of this perceptual study. The problem was stated and the background to the problem was given. The assumptions, delimitations and limitations of the study were outlined. The chapter concluded with an explication of special terms or definitions.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

This literature review includes a number of factors which may shape teacher perceptions of the teaching techniques they use.

Following consideration of the nature of teaching and the nature of perception generally, the stage will be set to facilitate the understanding of Alberta Home Economics teacher perceptions by:

1. Citing University of Alberta course qualifications for both the Bachelor of Education and the Bachelor of Science programs. Existing programs will be described as well as those used previously.

2. Describing the Home Economics curriculum paying special attention to the methodology described.

3. Describing previous research done in Home Economics Education in Alberta, emphasizing methodology.

4. Briefly surveying other research in Home Economics Education.

The chapter will conclude with a brief review of evaluation and condiseration of the place for teacher perceptions in an evaluation.

THE NATURE OF TEACHING

Definitions of Teaching

Teaching is that part of the educative process in which the teacher is the facilitator. Teaching has been defined as ". . .

professional intervention to enhance learning in a variety of instructional settings." (Howsam, 1976, p. 10)

Implied in this definition is the premise that teaching is a moral enterprise. It involves leading the child to something better. It is socially significant in that it facilitates the transfer of cultural values. Because it is both of these, it is also a rational process. Teaching is behavior that differs from much habitual behavior. (L. Stewart, 1976)

Tannemone and Carline (1971) and Stewart (1977) emphasize that teaching is an interaction between human beings. Stewart finds a significant difference between teaching and being a teacher. "The act of teaching is a form of communicating. Being a teacher is playing a role in a social organization." Stewart also notes that "Many persons may participate simultaneously but the actual message transmitted or the knowledge and skill acquired is a unique sharing between learner and teacher." (L. Stewart, 1977, p. 5)

Howsam (1976, p. 41) deals with teaching as a profession;

> In practise it is an applied or clinical science involving services to people; using processes of diagnosis, prescription, and implementation, and characterized by the creative integration of professional knowledge a skill, a personal style and teaching art.

The Educative Process

The educative process has four aspects which answer the questions of why, what, how and whether, in regard to teaching and learning. They are:

1. Objectives
2. Content needed to meet the objectives

3. Techniques for reaching objectives
4. Evaluation procedures

(Spitze, 1970)

Implicit in these statements is the fact that decisions regarding teaching techniques are left to the individual teacher. Decisions to use or not to use certain techniques may depend on teacher expertise with the technique, appropriateness for the student or students, appropriateness for the internalization of that particular concept, and teacher knowledge of that technique.

The Teaching of Home Economics

The teaching of Home Economics varies from the teaching of other subject areas in the nature of the subject content only. The teachers must make decisions regarding these matters:

1. The curriculum as an aid to planning
2. The creative process
3. Evaluation
4. Classroom management
5. Creating an atmosphere in the classroom
6. Organization of the Home Economics Department
7. Financial management for Home Economics
8. Choice of activities according to concepts and grade level
9. Methods, Material, and Media
10. Development of a Unit
11. Community resources
12. Safety in the Home Economics Laboratory
13. Public relations

14. Professionalism

15. Course Coordination

Spitze, 1970)

Teacher Characteristics

The Alberta Home Economics curriculum and the Alberta Social Studies curriculum are two examples of curricular approaches which use of objectives which enhance student self-directed learning. The teaching process then should facilitate student self-directed learning if these curricula are to be fully implemented. Consideration must be given to those characteristics of a teacher which lend themselves to the successful use of student self-directed learning.

There is a relationship between self-actualizing teachers and the facilitation of student self-directed learning. Smith (1968) found significant relationships among teachers' levels of self-actualization, degrees of dogmatism, and perception of use of teaching behaviors relevant to the development of student self-directed learning. Smith also found that more self-actualizing teachers were significantly more open-minded than were the less self-actualizing teachers.

Helen Loftus (1970) says

> The hope we have for a better future, the accomplishments of the past, and the achievements of the present are closely tied to the teacher as a person. Dependent upon the quality of her <u>being</u> are found her skills in teaching, her rapport with pupils, her status in the profession, and the many other variables thought to be important outcomes of her effort.

PERCEPTION

A basic consideration of the nature of perception has been provided to facilitate the understanding of the teacher perceptions

polled in this study.

Initially perception was regarded as an immediate response to a set of internal or external stimuli. It was a basic stimulus-response type of reaction on a sensory level, e.g. a baby "perceiving" light as indicated by the immediate reactions of the rods and cones of the eye. The implication in this rudimentary description was that all perception is a one-way process. It was assumed that the individual acted directly in terms of what he perceived and that he perceived all of the stimuli. Further research has shown that a cognitive process is involved in perception. (Fargus, 1976)

Human behavior indicates that perceptions are not simple and uncomplicated. Perception is a process of information extraction (Fargus, 1976). Which information? All of it? Some of it? When it has been extracted how is it interpreted? in the same way by everyone? or by a certain group? As Enns points out;

> Perceptions are not simple, accurate reproductions of objective reality. Rather, they are usually distorted, colored, incomplete and highly subjective versions of reality. (Enns, 1974)

A Model Describing the Perceptual Process

The development of the understanding of the nature of perception can be viewed as on a continuum beginning with a basic stimulus-response approach and culminating in the more intricate person-perception approach. Fargus, 1976, provides an information processing model which provides clues as to the differences in individual perceptions of seemingly similar stimuli.

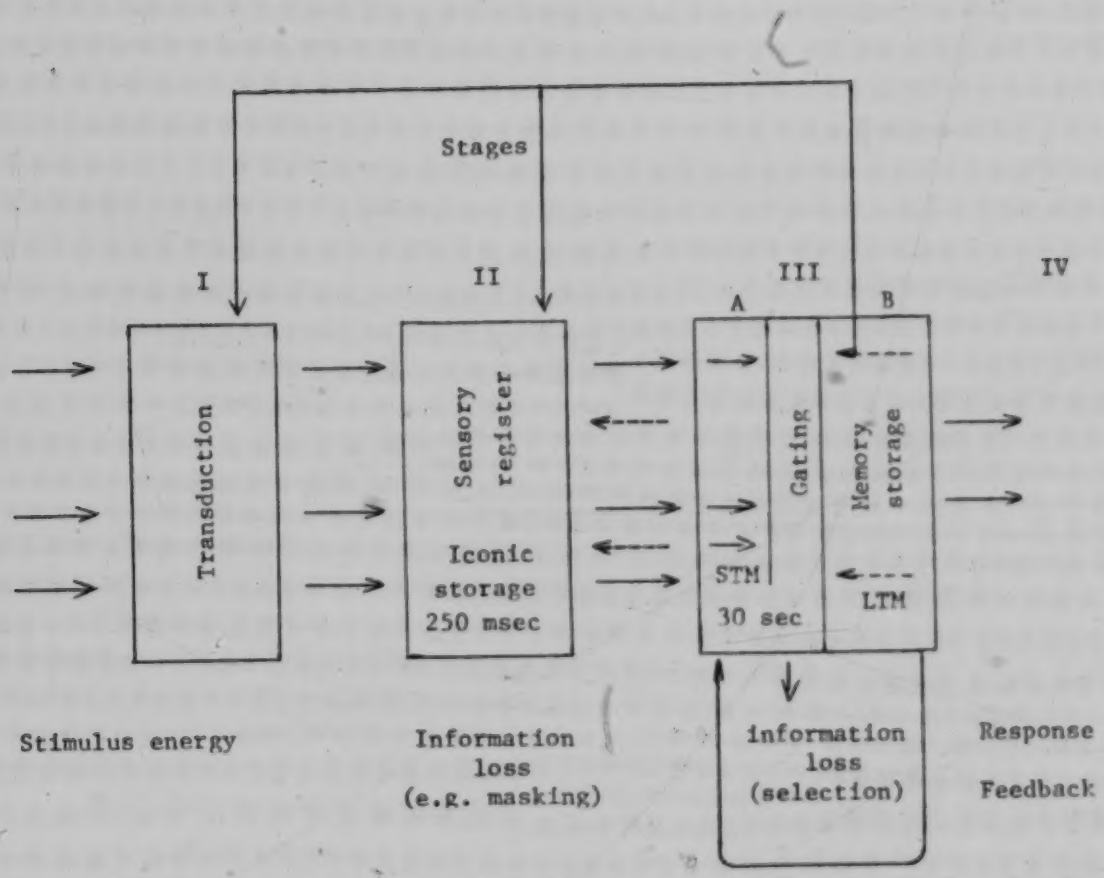

Figure 1: An information model of information processing

An Information Model of Information Processing
(Fargus, 1976)

As indicated in this model, perception is considered to take place in ordinal stages. Arrows leading from left to right represent the inflow of information, arrows leading from right to left represent the outflow of information. Vertical arrows represent information loss or modification. Note that this can happen in two places. The stages of the process may be described as follows:

Stage 1 Transduction

- the translation of physical information into informational messages that the nervous system can use.

Stage 2 Sensory Register

- Following transduction, sensory information is maintained for a brief time interval. This brief storage of the image which begins to fade a 250 msec has been called the icon. The data suggest that during the early stage of registration all (or nearly all) of the stimulus information is present intact. Additional processing then proceeds from this representation, rather then the actual stimulus itself. The advantage is that it actually "continues" the stimulus for some time after removal. Detection and orientation probably take place at this stage.

Stage 3 STM stands for Short-Term Memory. Information received in the icon must be processed and stored if it is to have any effect on behavior. Experiments show that subjects could not recall information after eighteen seconds but could after thirty seconds. Shortly after this memory rate drops off. Rehearsal is needed for retention.

Stage 3b LTM stands for Long Term Memory. LTM has a cognitive structure whose organizational properties enable the individual to uncover information necessary for successful interaction with the environment. This involves reasoning and problem solving. Learning by principles facilitates retention and transfer. The stimulus-response model did not account for information processing.

Stage 4 Response

- The behavioral measure is an index of the intervening brain process or experience.

(Fargus, 1976)

This view of perception as an information extraction process employs a cognitive stage approach. The process follows a continuum of information acquisition through to reasoning and problem solving.

Fargus, 1976, maintains that the cognitive processes, learning, perception and thinking are inter-related, with perception being the over-riding concept and learning and thinking being subsets. He

explains it in this way; learning is the process by which perceptual information is acquired through experience and becomes part of the organisms' storage of facts in memory. Stored facts become models against which cues are judged. Thinking is an activity inferred to be going on when an organism is engaged in solving problems. This also involves the use of models. Most importantly, learning determines the selectivity of perception. "The result of thinking modifies future learning and learning in turn can influence the way we perceive our world." (Fargus, 1976)

To view the nature of perception from another perspective, initially for the organism, perception is a reflexive action. The programming is wired in, for example, a built-in reaction to light. With maturation, more powerful sets are developed. The basic programming becomes more modified, that is, the organism not only perceives light, he discriminates between shapes and identifies his mother's face. Initial sets, therefore, are mediated by concepts and the thinking becomes more expert.

In relating learning and thinking to the perceptual process, stimuli possess potential which is extracted by the organism as learning. The learning is stored as memory and modifies the organism so that later perception of the same stimuli will be different. The constructive nature of this model is useful in the understanding of other areas of psychology.

Two important points have been made;

1. Adaptive behavior originates in perception.
2. The tools of learning and thinking depend to a large extent on what the individual has previously learned. (Fargus, 1976)

Person-Perception

The perceptual stimuli considered to this point have been only inanimate. The nature of perception is compounded when it is interpersonal.

> The problem of person-perception, thus, focuses on the processes through which one person perceives another person or group of persons in reciprocity. It seeks to understand the qualities, determinants and consequences of interpersonal perceptive structures that may emerge in any given interpersonal situation and go beyond the immediately given information. (Gon, 1970)

The concept of person-perception is valuable in understanding human interaction. In person-perception, the perceiver regards the object as having the potential of representation and intentionality. In other words, we are referring to the observations we make about intentions, attitudes, emotions, ideas, abilities, purposes, traits--events that are, so to speak, inside the person. . . . We seldom describe the sheer sequence of bodily movements of a person; rather we say that a person is friendly, fearful, boastful, hesitant, aggressive. (Taguiri, 1958) We are actually dealing with a double interaction.

Generally, perceived and perceiver react similarly to events. This has been called empathy or projection. Most importantly, the perceiver has a repertory of categorizing responses. These are limited by his own experiences as a person. This explanation is in keeping with Stage 3b of the information processing model. Not only must he have experienced the stimuli, but those experiences must have been learned so as to be kept in the Long-Term Memory. This model also supports the claim that "Every perception is colored with the emotions, feelings, thoughts of the moment, every situation can be viewed from various perspectives." (Curwin and Fuhrmann, 1975)

Under what conditions do one's perceptions change? Fargus

believes that most of, if not all perception is dominated by the outflow process. That is, organisms will perceive new stimuli in terms of the stored information in the LTM. This is in keeping with Bruner's (1973) explanation of perception. He says that basically perceiving involves a three-step cycle;

a. An expectancy of hypothesis.

b. Input of information from the environment.

c. Checking or confirmation procedure.

The expectancy is tempered by previous experience. For example, when meeting an individual for the first time, no previous knowledge about the individual would be available to provide clues about him. Only initial sensory clues such as height and coloring would be at hand. A second meeting would carry with it an expectancy, perhaps of friendliness, the meeting would confirm or deny the hypothesis. The change in one's perceptions would occur at the confirmation stage. Lack of confirmation would necessitate a new hypothesis and hence a revised perception.

Causal Attribution

One aspect of person-perception is causal attribution. This plays an important part in the cognitive structure of the environment. Causality refers to the situation in which the trait of character ascribed to a person depends on the situation in which the behavior is being observed. (Taguiri, 1958) Gestalt theorists make reference to the perception of the figure and the ground. The figure is seen in terms of the background. In a total situation, the influence of causal integration on the relations between parts will be either one of

assimilation in which the parts of an integrated structure will look as much alike as possible, or of contrast in which the parts will look as much unlike as possible. For example, if the parts are assimilated, a teacher in the 'field' when commenting on the quality of student teachers may say that they do not have the skills necessary for carrying on a discussion. Further comments may reveal that the teacher had only one or two such student teachers out of a number, however, she had assimilated all the information without differentiation.

If the parts are viewed in contrast the origin is taken as the standard for judging the quality of the act. For example, if a teacher known to be conscientious and thorough in following a curriculum, criticized that curriculum, his or her criticism would be considered in a more serious way than that of a teacher who tended to be less conscientious and responsible.

Attribution is affected by attitudes. There is a tendency to keep the ego level high.

> Since origins are assimilated to acts attributed to them, an act of low value, when attributed to the ego, will lower the ego value, and an act of high value will raise it. (Taguiri, 1958)

This is seen in rationalization and scapegoat behavior.

Attribution has an influence on the dynamic state of a person. Needs and emotions are correlated to the meanings of effects. Meanings of effects are determined by attribution to an origin. (Taguiri) For example; a reaction to the implementation of a new curriculum may be attributed to one's self (I haven't really tried to understand it), to the workings of change (Things just don't work out for me), or to another person or organization in the form of agression (They don't know what they're doing up there in the Ivory Tower). The latter example

points to the need for causal attribution. Where cognitive structures give rise to tensions, attribution takes the 'blame' off the individual, thereby restoring an equilibrium.

> Any perception . . . will be an interpretation of a situation made by an individual on the basis of his experiences and purposes. (Hamilton, 1966)

Teachers are in the people business. The teachers' perceptions will be colored by many variables including life experiences, formal education, teaching experience and their perception of what their role is. All parties with a vested interest in education seem to have their own perceptions of what they think the teachers' role should be. An overriding factor is the perception the teacher has of herself or himself as a person.

Conclusion

Perception was initially viewed as a stimulus--response reaction. Further study revealed an ordinal process as shown in the information processing model by Fargus. The concept of person-perception accounts for many of the intricacies of interpersonal relations. Reference to the perceptual process provides insights to the viewpoints of those involved in education and curriculum development.

Finally, one might ask if there is a 'right' perception. Ultimately, the discussion of perception will be epistemological. What is truth? That depends on how we have interpreted our experience.

Marsh, (1970) concludes,

> Thus, when an individual reacts to any situation, his behavior is always a function, not of the absolute character of the situation, but of his perceptions of it. It is not totally objective reality

> that counts, but to some extent depends on how the individual sees it to be. Consequently, any interpretation between an individual organization member and the organizational environment will be interpreted in terms of the individual's background and culture, his experience, his expectations and his needs.

REQUIREMENTS FOR CERTIFICATION

Teachers of Home Economics must have a thorough knowledge base in three areas, Modern Living, Clothing and Textiles and Food Science.

> While the basic skills are still an essential part of teaching high school in the secondary school, the program is expanded to include interpersonal relationships and family economics, management and housing. (Down, 1973)

To earn a Bachelor of Education degree, students must complete twenty full-session courses (120 credits) which normally are completed in four academic years. Student course plans must conform to the guidelines of the Board of Teacher Education and Certification which requires a minimum of seven full course equivalents (42 credits) in professional education and a minimum of eight full course equivalents (48 credits) in courses offered by faculties other than the Faculty of Education. Courses are chosen from six component areas:

1. Non-education courses

The purpose of these courses is to provide opportunities for students to explore areas of interest or to extend knowledge acquired before entering university. Generally students should select these courses without prescription. The courses of this component must be taken outside the teaching specialization.

2. Teaching Specialization

This serves as preparation in the candidate's area of teaching concentration and may consist of courses in a single academic

discipline or in related disciplines. Normally the courses taken in this component are to be taken outside of the Faculty of Education.

3. Student Teaching

This provides teaching experience for all students.

4. Curriculum and Instruction

This includes appropriate professional studies in Curriculum and Instruction.

5. Basic Education Courses

Include the equivalent of at least one single term course (three credits) in Educational Administration, one full course equivalent (six credits) in Educational Foundations, and one full course equivalent (six credits) in Educational Psychology.

6. Free Options

These will be chosen by the candidate without prescription.

University of Alberta Calendar
1976-77 (73.1)

A sample program may be found in Appendix (1).

Prior to 1971 the program was less flexible. Completion of a Bachelor of Education degree was not mandatory for a teaching certificate. For the standard secondary Bachelor of Education route, upon completion of the first two years, candidates were eligible for the Interim Standard S Certificate, valid for teaching of grades four to eleven. Upon completion of three years, the Interim Professional Certificate, valid for teaching of grades one to twelve, and upon completion of four years, the Bachelor of Education degree. The secondary Route Program was specifically prescribed. At least three courses in the major field had to be completed by the end of the second year.

A description of the Secondary Route Program prior to 1971 is provided in Appendix (2).

Requirements for Certification After an Approved Degree Prior to 1975

Prior to 1975 holders of a bachelor's degree acceptable to the Minister and including the necessary prerequisites could be granted an Interim Professional Certificate upon completion of one year's approved work in the Faculty of Education. Before such Interim Certificates could be made permanent the holder was required to: (1) teach successfully in Alberta schools for two years and (2) be recommended by a Superintendent or Inspector of Schools.

Holders of approved degrees were required to attend one full winter session for certification. For those emphasizing preparation as a Secondary teacher, these courses could be selected:

1. Educational Administration 461
2. Educational Psychology 471 and one other approved half course in Ed. Psy.
3. Curriculum and Instruction 450
4. Curriculum and Instruction in major field
5. Educational Foundations 492 or 496
6. Educational Foundations 413 or 417 or Ed. Psy. 487 and 489

(Faculty of Education Calendar, 1967-8)

Students who presented a degree which did not contain the equivalent of a major as required in the regular secondary route Bachelor of Education were required to make up such deficiencies before proceeding with the certification program.

The major field of Home Economics required:

1. Chemistry 250
2. Home Economics 201 and 221
3. Home Economics 203 and 307 (those granted advanced placement were required to take 205 and 309)
4. Home Economics 321 and 325
5. Home Economics 303 and 355
6. Home Economics 350
7. An approved Home Economics option or an approved option in a related field.

Significant Changes in the Program

Two significant changes were made in the program modification begun in 1970-71:

1. The adoption of the component model which was the basic framework for program planning.

   The purpose of the component model and plans based on it was to minimize the difficulties in transferring from one program to another or from one faculty to another. The philosophy behind the model is based on the recognition that individual differences exist in the motivation, knowledge, career objectives and preferred learning styles of prospective teachers. The component model provides a basic framework for flexible program planning. (Calendar, 1976-77)

2. The stipulation was made that all students entering the Faculty of Education in September, 1973 or later, must complete either;
   a. the four year Bachelor of Education degree, or
   b. the certification program of the University of Alberta for holders of an approved degree.

These qualifications must be met before the candidate may be recommended to the Department of Education for a teaching certificate.

Alberta teaching certificates are issued only by the Department of Education of the province of Alberta. The Faculty of Education recommends students to the Department of Education for the teaching certificate to which they are entitled.

CURRICULA

Definition of a Curriculum

"A curriculum is a conception of an organized sequence of learning experiences or opportunities designed to effect certain changes in behavior." (L. Stewart, 1976) This would indicate that a curriculum is primarily a mental activity. Application of the perceptual process to this concept of curriculum gives some clues as to the nature of the problems in implementing curricula. The question of whether a curriculum has been effectively implemented can only be answered if there is a clear agreement on the meanings of terms used. Meanings are found in the words and symbols comprising the curriculum. Perceptions of these meanings may differ for different individuals, depending upon their previous experiences.

The Home Economics Curriculum

Home Economics is a field of knowledge and services concerned primarily with strengthening family life. As well, it is a field which synthesizes knowledge drawn from its own research, from the physical, biological, and social services, and arts and which applies this knowledge to improving the lives of families and individuals.

The Alberta Home Economics curriculum is based on a conceptual framework formulated in the American Home Economic Association Report

of a National Project: Concepts and Generalizations: Their Place in the High School Home Economic Development.

> The Home Economics has for its major purpose the education of youth that will enable them to meet and solve problems of everyday living. It should promote experiences that will develop attitudes, skills, understandings, and techniques essential for the maintenance and improvement of the home and which could be of value in wage earning. These assets, important for both goals, include health, attractive appearance, and personality, the use of money to get the value most needed for a satisfying life, an understanding of others, and good relationships with them.

The curriculum is composed of nine major concepts:

1. Human Development and the Family
2. Management
3. Housing
4. Significance of Food
5. Nature of Food
6. Provision of Food
7. Significance of Clothing and Textiles to the Individual and Society
8. Nature of Clothing and Textiles
9. Acquisition and Use of Clothing and Textiles

The most significant characteristic of the curriculum is that while much of the content found in earlier guides may be the same, the approach has changed. The emphasis is on the student. The entire approach involves:

Student Activity

Student problem solving

Student generalizations

Student evaluation

Student growth

(Curriculum, 1972)

The Alberta Home Economics Curriculum Guide is a service publication only. It was designed to help teachers meet the needs, interests, strengths and limitations of all students. The Junior and Senior High School Programs of Study as published by the Department of Education, contain the official statement concerning Home Economics from grades seven to twelve. The information in the curriculum guide is prescriptive insofar as it duplicates that information contained in the Program of Studies issued under the authority of the Minister of Education pursuant to Section 12 of The School Act. (Alberta Curriculum Guide, 1972)

The Handbook to accompany the Curriculum Guide was designed as an ideal source to stimulate the daily routine of the classroom by generating creative and individualistic teacher learnings and experiences for the educational benefit of the student. (Handbook to Accompany the Curriculum Guide, 1972)

The teacher is encouraged to make use of and practise creativity. She is given suggestions for teaching techniques as suggested activities for each concept in the curriculum guide;

> The suggested activities are for student experiences. These are not prescriptive, each teacher will have her own ideas how activities may be varied to suit different groups of students. Student participation in planning is vital. (Curriculum Guide, 1972)

Suggested media and teaching aids are included as well.

The handbook to accompany the curriculum guide gives additional guidance and specifically describes twenty-three teaching methods. Guides for using and purposes for use are included. The techniques are:

1. Case problem study
2. Discussion
3. Buzzing

4. Circular response
5. Debate
6. Panel
7. Questions and Answers
8. Symposium
9. Total Class discussion
10. Committee work
11. Demonstration
12. Dramatization
13. Skits
14. Pantomime
15. Field trips
16. Individualized Study
17. Interview
18. Laboratory work
19. Lecture, talk or speech
20. Observation
21. Programmed Instruction
22. Team Teaching
23. Television

Handbook, pp. 110-111

PREVIOUS RESEARCH IN HOME ECONOMICS EDUCATION IN ALBERTA

The effectiveness of the Home Economics program may be due to many factors including the adequacy or the inadequacy of teacher training or the inherent nature of the curriculum itself.

Research has been done on curriculum needs in Alberta (Pisesky, 1971), Attitudes of Teachers Toward Modern Living (Bowen, 1974), and Attitudes Towards Home Economics (Plican, 1975). The focus of inquiry in this research has been on the curriculum and not on the training of people to teach it.

Family Life education is a part of the Modern Living component of Home Economics. Evenson (1973, p. 64) found that only thirty-five per cent of the total sample felt that teacher preparation programs provided techniques that were most useful in teaching Family life. This was in reference to general teaching methods courses, not necessarily those associated with Home Economics.

Bowen (1974) found that

> Although eighty four per cent of the teachers indicated an interest in Modern Living topics only twenty-six per cent of the sample felt they were devoting one-third of the school year to developing these concepts.

"Values" and "Human Development" concepts were considered to be of greater difficulty in teaching than other areas of the curriculum. As well,

> A majority of the teachers noted that it was difficult to maintain class interest in Modern Living because students were disinterested in the program. Twenty-four per cent of the sample also felt the present course did not appear to meet the actual needs of the students.

Plican (1975) found that ". . . teachers themselves indicated a lower attitude toward Modern Living than toward Clothing and Textiles and Food Science." She observed that as teachers develop more confidence in the field through more in-service programs, university courses and experience in the course, their perception may improve.

OTHER HOME ECONOMICS EDUCATION RESEARCH

Carano (1970) investigated teachers' assessment of their ability according to the competences identified for the role of the Home Economics teacher as designated by an instrument developed for the study. The teacher questionnaire contained a seventy-five item competence checklist and one page of general data. The checklist constituted a Likert-type scale which was designed to measure the attitudes of teachers toward their own teaching according to weighed responses ranging from one to five representing degrees of competence.

The findings in part, included an analysis of the twenty-one competence statements rated as "moderate" competence or less than "adequate" competence. This was interpreted as meaning that the teachers perceived themselves as having a lesser degree of competence in, among others;

(a) planning activities to help students identify their own personal philosophy;

(b) planning learning experiences to meet the individual differences of students;

(c) identifying and meeting the individual needs of students;

(d) organizing and teaching Home Economics subject matter within a conceptual structure.

An understanding of a broad range of teaching techniques as well as the knowledge of when, where, and how to use them would seem to be a necessary pre-requisite to successfully meeting these four goals. A study of teaching techniques actually used was not a part of the Carano study.

SIMILAR RESEARCH IN OTHER SUBJECT AREAS

The teaching of Home Economics requires a broad knowledge base of the subject area and an ability to perform related skills. There is a similarity between Home Economics and Industrial Arts in this regard. Ross (1976) discovered that Industrial Arts teachers in Alberta felt adequately prepared to teach Junior High but inadequately prepared to teach Senior High level students. Specific recommendations from that study were useful to the University of Alberta teacher education program.

Similar studies have been valuable in other subject areas. An assessment of the Master plan for the Social Studies in Alberta concluded that

> concepts are still developed in traditional way, not by rule; the emphasis is still on the "designative" at the expense of the "appraisive" and the "prescriptive"; and lower level skills of inquiry still take precedence over the higher level skills of value inquiry. We further conclude that some of the reasons for this slippage are: lack of time for program development, lack of resources, lack of consultative services, and lack of teacher competence in program development. (Downey, 1975)

EVALUATION

One definition of evaluation is ". . . a process which determines the extent to which objectives have been achieved." (Cross, 1973, p. 5) This definition implies the direct relationship of evaluation to objectives and suggests that rather than a single event which determines final completion or attainment of goals, evaluation is an ongoing process which measures the degree to which goals are being attained.

A number of education evaluators have struggled with the concept of evaluation and have arrived at definitions having a number of factors

in common. Provus (1971) defines evaluation as the comparison of performance against a standard. Stufflebeam et al. (1971) defines education evaluation as "the process of delineating, obtaining, and providing useful information for judging decision alternatives. Lee Cronbach (1963) in an effort to draw attention to its full range of functions, defined evaluation very broadly as ". . . the collection and use of information to make decisions about an educational program." Stake (1967) most clearly points out the two dimensions of evaluation in his description of curriculum evaluation:

> Curriculum evaluation requires collection, processing, and interpretation of data pertaining to an educational program. For a complete evaluation two main kinds of data are collected. (1) Objective descriptions of goals environment, peronnel, methods and content and outcomes and (2) personal judgments as to the quality and appropriateness of those goals, environments, etc.

These definitions reflect some of the current thinking in evaluation. It is recognized that evaluation must be a process. The process is in two parts, the description of data and some judgment on the basis of that data. Popham (1973) differentiates between evaluation and measurement saying that evaluation consists of worth determination and measurement consists of status determination. That is, the evaluator must reach a judgment regarding <u>how good</u> the results of the measurement are.

The Components of Evaluation

To evaluate, the first step is to describe the situation or program. What will be described in that program? Stake says it should be all the data pertinent to the program. A complete evaluation must include all aspects of the program as well as the perceptions of these

aspects by all those people affected by the program. How will this data be described? A major problem is the lack of adequate instruments for accurate description (MacKay and McGuire, 1971). Who will evaluate? Since education curricula involve professionals from various fields, specialists in their fields should evaluate that part of the curriculum which is their field of expertise. Somewhere along the line, some judgments will have to be made.

Regardless of the model or combinations of models that are used, evaluation should be in terms of selected objectives. Cross (1973, p. 13) offers four more principles of evaluation which might well be considered criteria for evaluating. She says that evaluation should be a comprehensive, cooperative, continuous process and concerned with valuing.

Summary

The model the evaluator chooses will be determined by the objectives of the evaluation. Robert E. Stake (1967) states that "The specialist in evaluation seems to be increasing his emphasis in fullness of description." Stake's Congruence-Contingency Model puts greater emphasis on relationships between variables than do either the Provus or Stufflebeam models. The Provus Discrepancy Model does not allow for further questions as to the appropriateness of objectives, it simply creates an awareness of discrepancies which may lead to a number of decision alternatives. It is a tool for decision making and is primarily formative. Stufflebeam's Total Evaluation Model is primarily administrative involving the collection of information for particular decisions. (MacKay and Maguire, p. 18)

Evaluation should be as comprehensive as possible. The best instruments available should be used and any inadequacies should be acknowledged. Instrumentation is an area in need of further research. Decisions must be made on the basis of what has been evaluated, not on assumptions. Finally it must be recognized that evaluation results in human judgment. Evaluators must acknowledge and carry out this responsibility.

An in depth treatment of evaluation may be found in Appendix 3.

CONCLUSION

The perceptions of teachers using a specific curriculum as to the teaching techniques they use and the techniques they believe they are expected to use should be a part of the descriptive data used in evaluating that curriculum.

Teachers are the communicators of the message or concepts in the curriculum. Whether or not they employ the techniques suggested may be a function of their training, experience, available resources, interest, and/or interaction with fellow professionals. Knowledge of the teachers' perceptions of their teaching techniques may provide clues in an evaluation to the reasons for the successful or unsuccessful implementation of a curriculum.

CHAPTER III

DESIGN OF THE STUDY

This chapter includes a brief description of the purpose of this study. It outlines the rationale for the development of an instrument designed to measure teacher perceptions of specific teaching methods used. The sample is identified and the instrument described. The pre-testing of the instrument and collection of data are followed by a description of the procedures used to analyze the data.

The Purpose

The primary purpose of this study was to assess the perceptions of teachers of Home Economics as to how they teach and how they believe they are expected to teach. The perceptions were assessed by analyzing teacher responses to a number of teaching techniques identified in the Curriculum Guide and accompanying Handbook.

Rationale Underlying the Construction of the Instrument

A mailed questionnaire was deemed the most practical means of reaching a random sample of teachers of Home Economics in the Province of Alberta. While the interview method has been claimed to be more accurate, (Kerlinger, 1964, p. 467) it was not a practical alternative.

Isaac and Michael (1971, p. 61) caution that in method-of-teaching studies, it is dangerous to assume that two teachers are actually teaching with the same method. Observers often report

critical differences that suggest two versions of a given method. In an attempt to overcome this pitfall, the questions asked were method descriptions rather than using only the names of the methods.

Measurement is described as having a reactive effect when the subject is reacting to the measurement process itself. One aspect of this is the guinea pig response in which the subject may feel either that he must do his best or he may feel defensive and antagonistic. A second effect may be that the method of data collection stimulates trains of thought not previously characteristic of the subject.

Role selection is another reactive effect. The subject tends to assume a role of "the kind of person he thinks he should be in this situation." The validity of the study decreases in proportion to the extent that this role differs from his natural behavior.

The letter accompanying the instrument specified that the respondent was part of a random selection of Home Economics teachers in the province of Alberta. The respondents were not required to identify themselves. Both of these factors were designed to lessen the guinea pig and role selection reactive effects.

A third reactive effect is that of the measurement itself stimulating change. This is not necessarily a negative reaction. Initial "I don't know" answers on opinion surveys frequently set into motion opinion forming processes which otherwise would not have happened (Isaac and Michael, 1971). In the pretest of the questionnaire, comments by respondents indicated that a spark of curiosity was engendered by the questions as to what actually was in the curriculum. A second type of comment revealed a pedogogical effect of the questionnaire. The descriptive nature of the questions served as

teaching technique suggestions.

Response sets are a fourth reactive effect to questionnaires. This describes the tendency of subjects to respond in certain predictable ways. Respondents will more frequently endorse a positive statement than disagree with its opposite. Isaac and Michael also state that respondents more often than not will prefer strong statements to moderate or inconclusive ones.

The nature of the material precluded the use of only strongly positive or very negative responses. The information desired indicated the need for answers which could be placed on a continuum. This led to the use of a Likert type response scale. A Likert scale consists of a large number of statements which indicate clearly a position for or against an issue. Each statement is followed by several alternative answers of which the respondent must choose one. (Van Dalen, 1962, p. 345) The answers are on a positive to negative continuum. Space was provided in each question for open-ended comments. The inclusion of space for comments also served to distribute the circled answers on the page. This was in order to lessen the response set in which respondents to sequences of questions presented in a similar format tend to answer items in the second half of the questionnaire differently than in the first half. A possible explanation for this reaction is that the respondent becomes aware of his response pattern halfway through and shifts to a variation to avoid monotony or conformity. (Isaac and Michael, 1971)

A measure is described as non-reactive when it does not change that which is being measured. Triangulation is a measurement strategy

designed to overcome both reactive and non-reactive measures. Essentially triangulation involves the use of more than one measure to describe the phenomena. Basically this means selecting more than one dependent variable.

Identification of the Sample

A random sample of teachers of Home Economics in the province of Alberta, as identified by the Department of Education listing entitled Home Economics Teachers in Alberta 1976-1977, were polled. One third of the population (132 teachers) received the questionnaire, eighty-four (62.5%) responded.

Design of Instrument

Because no specific instrument exists to assess Home Economic teacher perceptions in Alberta, an instrument was developed by adapting and augmenting existing instruments. The suggestions of Isaac and Michael (1971), Sellitez (1959) and Cronbach (1949) provided guidelines for the instrument construction. The Report of an Assessment by L.W. Downey Research Associates Ltd. was a useful model.

The instrument consisted of two parts. Part A was composed of eleven questions related to background information about the teachers, the schools and classes in which they taught. Part B of the questionnaire was composed of twenty-six two-part questions. The first part of each question described one specific teaching technique. The teachers described their use of that technique by circling Often, Occasionally, Seldom or Never. The second part of each question dealt with the perceptions of the teachers as to the emphasis they believed

was put on each technique in the curriculum guide and handbook. They responded by circling Considerable, Some, Little, Very Little, and Don't Know.

Instrument Pretest

The instrument was pretested to determine its acceptability, appropriateness and readability. The pretesting participants were two urban high school teachers, three rural junior high school teachers, and two urban junior high school teachers. The pretesting was by personal interview.

As a result of the pretesting, minor changes were made in the wording of some of the background information. In Part B some technique descriptions were revised for clarity and an additional response category of "Don't Know" was added to the second part of each question.

Collection of Data

The questionnaire was revised as required and mailed with a covering letter and stamped return envelope to a random sample of teachers of Home Economics in the province of Alberta. A follow-up letter was mailed two weeks later. Sample copies of each of these letters and the questionnaire appear in Appendix #4.

ANALYSIS OF THE DATA

The information obtained from the questionnaires was transferred to computer data cards. For each item, responses were converted to numerical values as follows: Often = 4, Occasionally = 3, Seldom = 2, Never = 1. Initially frequency counts and percentages were obtained to indicate the distribution of responses of the total sample for each item.

A factor analysis was conducted on Part B of the instrument to determine whether the techniques described could be grouped together to simplify reporting procedures.

F-tests were conducted on variables in which more than two items were included in the variable to determine whether there was a significent difference between those variables and the twenty-six teaching technique items.

T-tests were conducted on variables of two items to determine whether there was a significant difference between those variables and the twenty-six teaching technique items.

The T-test is a special case of the F-test. It is conducted between two means whereas the F-test is conducted between two or more means. The purpose of these tests is to discover and evaluate differences between effects rather than the effects themselves. (Nie, et al., 1975) Differences at the .05 and .01 level were reported.

The Scheffé Multiple Comparison of Means test was conducted on items which were identified as significant in the F-tests. Scheffé's test is appropriate for examining all possible linear combinations of group means, not just pairwise comparisons. Thus, it is stricter than the other tests. (Nie, et al., 1975, p. 428) Differences noted in the Scheffé test were reported at the .1 level of significance.

The Scheffé test uses the F-test and, as with the T and F test, meets certain assumptions underlying their use, namely:

1. Random Sampling
2. The variables which are the concern of the study are randomly distributed.
3. homogeneity of variance
4. The contribution of factors to total variance are additive.

There is no reason to believe the requirements for random sampling were not met.

A Pearson product moment correlation coefficient was conducted between parts a and b of each of the twenty-six technique questions to determine whether a linear relationship existed and if so what the strength of the relationship was. Differences at the .05 and .01 significance levels were reported.

Summary

An instrument was developed to measure the perceptions of teachers of Home Economics in Alberta as to the teaching techniques they use and the techniques they believe they are expected to use as indicated in the Home Economics Curriculum Guide and accompanying Handbook. The instrument consisted of two parts; teacher background information and questions regarding specific teaching techniques.

The data were collected and analyzed using a number of descriptive and inferential statistical tests.

CHAPTER IV

ANALYSIS AND DISCUSSION OF THE DATA

Introduction

This chapter deals with the findings of the study. Data were sought from a random sample of teachers of Home Economics in the Province of Alberta. Questionnaires were sent to 132 teachers of whom 84 (63.6%) replied. Eighty-three questionnaires were used in the analysis, one response was invalid.

Background Characteristics

Part A of the questionnaire dealt with background information regarding the teachers and the schools in which they taught.

Part B of the questionnaire was composed of twenty-six questions pertaining to specific teaching techniques. The questions had two parts. Part (a) queried the perceptions of the teachers as to the techniques they used in their Home Economics classes. Part (b) queried the perceived emphasis in the curriculum and handbook of the techniques. The questions described the techniques rather than naming them. Part B of the questionnaire was in a modified Likert format.

BACKGROUND INFORMATION

The academic background of the teachers responding is illustrated in Table 1. Three (3.6%) of the teachers had two years of training beyond high school. Three (3.6%) had three years of training, fifty-five (66.3%) had four years of training and twenty-two teachers (26.5%) had five years or more training beyond high school.

Table 1. Years of Training Beyond High School

Years	N	%
2	3	3.6
3	3	3.6
4	55	66.3
5 or more	22	26.5

Table 2 shows the years of experience in teaching Home Economics. Thirteen teachers (15.7%) were in their first year of teaching. Ten (12%) were in their second year, seven (8.4%) were in their third year and four (4.8%) were in their fourth year. Twelve teachers (14.5%) were in their fifth year, fifteen teachers (18.1%) had from six to nine years of experience and twenty-two teachers (26.5%) indicated experience in teaching Home Economics for nine or more years.

Table 2. Years of Experience in Teaching Home Economics

Years	N	%
1	13	15.7
2	10	12.0
3	7	8.4
4	4	4.8
5	12	14.5
6-9	15	18.1
9 or more	22	26.5

The number of years since the teachers qualified for Teacher Certification is indicated in Table 3. Fifteen teachers (18.1%) qualified one year ago. Twenty (24.1%) qualified from two to four years ago. Twenty (24.1%) qualified between five and eight years ago, and ten teachers (12%) qualified between eight and eleven years ago. Fifteen teachers (18.1%) qualified twelve or more years ago. Three teachers did not respond to the question.

Table 3. Number of Years Since Qualification for Teacher Certification

Years	N	%
1	15	18.1
2-4	20	24.1
5-8	20	24.1
8-11	10	12.0
12 or more	15	18.1
No response	3	3.6

The number of years since the respondents attended Evening or Summer School courses for credit are listed in Table 4. Twenty-two teachers (26.5%) attended credit courses one year ago. Nine (10.8%) attended two years ago, eight (9.6%) three years ago and ten (12.0%) four years ago. Twelve teachers (14.5%) attended five years ago and 10 teachers (12%) attended between six and nine years ago. Six teachers (7.2%) attended ten or more years ago. Three teachers (3.6%) had not attended summer school or evening credit courses and three

(3.6%) did not respond to the question.

Table 4. Number of Years Since Evening or Summer School Courses were Attended for Credit

Years	N	%
1	22	26.5
2	9	10.8
3	8	9.6
4	10	12.0
5	12	14.5
6-9	10	12.0
10 or more	6	7.2
Not attended	3	3.6
No response	3	3.6

Seventy-nine (95.2%) of the eighty-three respondents indicated a major in some aspect of the field of Home Economics. As illustrated in Table 5, thirty-nine (47%) of the teachers had an Education degree majoring in Home Economics. Twenty-three (27.7%) of the teachers indicated a general B.Sc. degree in Home Economics. Seven teachers (8.4%) received a B.Sc. in Home Economics majoring in Foods and Nutrition, eight (9.6%) received a B.Sc. in Home economics majoring in Clothing and Textiles and two teachers received a B.Sc. in Home Economics majoring in Family Studies.

Three teachers had varied specializations. One (1.2%) had a Voc. Ed. degree specializing in clothing. One (1.2%) majored in French

and the third (1.3%) had a Master of Arts degree majoring in Geography and History. One teacher (1.3%) did not respond to the question.

Table 5. Major Area of Specialization at University

Specialization	N	%
Education majoring in Home Economics	39	47.0
B.Sc. in Home Economics, General Program	23	27.7
Foods and Nutrition	7	8.4
Clothing and Textiles	8	9.6
Family Studies	2	2.4
Voc. Ed. - Clothing	1	1.2
French	1	1.2
Arts - Geography and History	1	1.2
No response	1	1.2

The membership of teachers in their professional organizations is noted in Table 6.

Thirty teachers (36.1%) were members of the Alberta Home Economics Specialist Council of the Alberta Teachers' Association. Eight (9.6%) teachers were members of the Alberta Home Economics Association. Seventeen teachers (20.5%) were members of both organizations. Twenty-eight teachers (33.7%) were not members of either organization.

Table 6. Professional Membership

Organization	N	%
Alberta Home Economics Specialist Council of the Alberta Teachers' Association	30	36.1
Alberta Home Economics Association	8	9.6
Both the above	17	20.5
Neither of the above	28	33.7

The location of the schools in which the respondents taught is illustrated in Table 7. Thirty-six per cent taught in areas with a population of 10,000 or less. The remaining 47 per cent taught in urban areas of 10,000 or more.

Table 7. Location of School

Location	N	%
Rural (10,000 population or less)	36	43.4
Urban (10,000 population or more)	47	56.6

The schools operated on a variety of schedules. Twenty-five schools (30.1%) offered a yearly program. Fifty-one schools (61.4%) offered a semestered program. Three schools (3.6%) offered a program which was semestered for some grade levels and yearly for others. Two schools (2.4%) offered a trimestered option program in which Home Economics was one of the options. Two school programs (2.4%) were not

identified by the respondents. These data are illustrated in Table 8.

Table 8. School Program Schedule

Schedule	N	%
Yearly	25	30.1
Semestered	51	61.4
Combination of above	3	3.6
Trimestered Options	2	2.4
No response	2	2.4

Class loads are indicated in Table 9. One teacher (1.2%) indicated an average class load of six to ten students. Three teachers (3.6%) averaged ten to twelve students per class and thirty-four teachers (41.0%) averaged twelve to sixteen students per class. There were sixteen to twenty students in the classes of thirty-six teachers (43.4%). Seven teachers (8.4%) had class loads of twenty to twenty-four students and two teachers (2.4%) had class loads of more than 24 students.

Table 9. Average Number of Students per Home Economics Class

Number	N	%
6-10	1	1.2
10-12	3	3.6
12-16	34	41.0
16-20	36	43.4
20-24	7	8.4
More than 24	2	2.4

Table 10 indicates the number of minutes of Scheduled Preparation time per week allowed for each teacher. Four teachers (4.8%) had no scheduled preparation time. Eleven teachers (13.3%) had less than forty minutes of scheduled preparation time. Twenty-four teachers (28.9%) had forty to eighty minutes, nine teachers (10.8%) had eighty-five to one hundred and twenty minutes of preparation time and thirty-nine teachers (47%) had more than one hundred and twenty minutes. For some of the teachers, the preparation time was allotted all in one semester with the result that there was no preparation time in the previous semester. The teachers indicated that the preparation time indicated was for all the subjects they taught as well as for Home Economics.

Table 10. Minutes of Scheduled Preparation Time per Week

Minutes	N	%
No Preparation Time	4	4.8
Less than 40	7	8.5
40-80	24	28.9
85-120	9	10.8
More than 120	39	47.0

ANALYSIS AND DISCUSSION

A factor analysis of the twenty-six questions on teaching techniques yielded no commonality, therefore, an item by item analysis was proceeded with.

Frequency of Responses

Forty percent of the teachers used some of the techniques occasionally. Twenty-four percent indicated that they seldom used some of the techniques and twenty-three percent often used some of the techniques. Thirteen percent never used some of the techniques.

Most teachers used higher order questioning, Individual Study, Problem Solving, Teacher Given Demonstrations and Laboratory work often. Skits, Pantomimes, and Music were the techniques most never used (Table 11).

Forty-three percent of the teachers perceived some emphasis in the curriculum of most of the techniques. Eleven percent did not know what emphasis was placed on some of the techniques, notably staff involvement, skits, pantomimes and the use of music. Higher Order Questioning, Individual Study, Teacher Given Demonstrations, and Laboratory work were perceived to be given the greatest emphasis in the curriculum (Table 12).

Question Results

This section deals with the answers to the three questions posed in this study. Question number one has been re-formulated into a null hypothesis, the others remain in question format. The null hypothesis is either rejected or not rejected on the basis of the statistical levels of significance obtained.

TABLE 11

Frequency of Use of Techniques

Technique	Often	Occasionally	Seldom	Never
Panel	6	37	28	11
Symposium	7	43	30	2
Debate	2	25	37	17
Programmed Instruction	39	22	19	2
Staff Involvement	12	30	24	17
Written Reports	20	50	10	3
Oral Reports	8	49	19	7
Higher Order Questioning	54	26	3	0
Individual Study	48	32	2	0
Skits	0	8	21	53
Role playing	2	25	34	20
Case Study	25	43	12	1
Committee work	21	49	9	3
Resource Persons	7	50	21	3
Interviews	5	26	37	11
Teacher Centered Instruction	40	29	12	1
Problem Solving	17	50	14	0
Group Work	23	40	14	4
Teacher Given Demonstrations	54	22	5	0
Student Given Demonstrations	8	39	28	7
Pantomime	0	9	32	41
Field Trips	1	41	26	14
Laboratory Work	68	10	4	0
VTR or TV	10	26	21	25
TV Programming	14	48	15	5
Music	3	19	24	36
Percentages of Total Responses	23%	40%	24%	13%

Table 12

Perceived Emphasis on Techniques

Technique	Considerable	Some	Little	Very Little	Don't Know
Panel	13	36	10	18	3
Symposium	14	38	13	9	7
Debate	3	37	13	14	11
Programmed Instruction	12	29	17	14	9
Staff Involvement	10	20	10	21	18
Written Reports	17	50	9	2	3
Oral Reports	8	47	20	4	2
Higher Order Questioning	30	29	7	6	5
Individual Study	29	37	5	5	4
Skits	3	17	16	19	21
Role playing	11	31	21	8	8
Case Study	14	46	9	8	3
Committee Work	13	43	11	4	8
Resource Persons	18	50	6	5	2
Interviews	4	36	13	14	11
Teacher Centered Instruction	19	39	7	10	4
Discovery Learning	20	44	5	7	3
Group Work	22	39	12	3	4
Teacher Given Demonstrations	30	32	5	8	4
Student Given Demonstrations	11	31	18	8	11
Pantomime	2	18	18	15	27
Field Trips	10	45	13	7	3
Laboratory Work	47	19	6	1	6
VTR or TV	13	25	11	20	10
TV Programming	5	42	10	12	11
Music	1	9	15	26	27
Percentage of Total Responses	18%	43%	15%	13%	11%

Null Hypothesis 1. The following factors were not statistically influential in the use by teachers of some or all of the twenty-six teaching techniques identified:

1. Years of training beyond high school
2. Area of Specialization at University
3. Number of years since qualifying for teacher certification
4. Years of teaching experience
5. Years since courses taken for credit
6. Membership in professional organizations
7. Location of school
8. School program scheduling
9. Class loads
10. Minutes of scheduled preparation time
11. Teaching at the junior or senior high school level

The use of the twenty-six teaching techniques was compared with the eleven different background variables using Analysis of Variance and Scheffe Comparison of Means.

Data are reported on those instances in which a statistically significant difference ($p \leq .05$) was noted between teacher background characteristics and teaching techniques. Data are reported by considering each of the background variables separately. The Scheffe tests of significant differences between means are reported at $p \leq .10$.

Teacher background characteristics made a significant difference in the use by the teachers of twelve teaching techniques. The F test of significance conducted on the variables of: Years of Training, Years Since Qualifying for Teacher Certification, Years of Teaching Experience, Years Since Courses Were Taken for Credit, and whether the school was in a rural or an urban setting, yielded no probability levels of less than $p \leq .05$. This would seem to indicate that there

is no significant difference between these background characteristics and the teaching techniques used.

Table 13

Analysis of Variance of University Specialization and Frequency of Use of Written Reports

Source	SS	MS	df	F
Groups	6.78	1.36	5	2.98**
Error	35.03	.45	77	

** $p \leq .05$

Significant difference ($p \leq .10$ was found between

(a) Food and Nutrition Majors (Mean = 2.40) and B.Sc. in General Home Economics (Mean = 3.30).

The analysis of variance on Major Area of Specialization at the University and teaching techniques yielded three significant tests. The comparison of use of written reports and university specialization of teachers was significant at $p \leq .05$ ($F = 2.98$, $df = 5$). A Scheffé test was conducted to identify significant differences between means. The only significant difference was found between B.Sc. in Home Economics General Program Majors who used written reports between Occasionally and Often and Food and Nutrition Majors who used written reports between Seldom and Occasionally (B.Sc. Home Economics mean = 3.3, Food and Nutrition mean = 2.4; $p \leq .10$). (Table 13)

Table 14

Analysis of Variance of University Specialization and Frequency of Use of Problem Solving

Source	SS	MS	df	F
Groups	3.58	1.19	3	3.42**
Error	25.09	.35	72	

** $p \leq .05$

Significant difference ($p \leq .05$) was found between

(a) Clothing and Textiles Majors (Mean = 2.63) and B.Sc. in General Home Economics (Mean = 3.35).

The analysis of variance on Problem Solving and University Specialization of teachers was significant at $p \leq .05$ ($F = 3.42$, $df = 3$). A Scheffe test was conducted to identify significant differences between means. The only significant difference ($p \leq .05$) was found between Clothing and Textiles Majors (Mean = 2.63) and B.Sc. in General Home Economics (Mean = 3.35). Teachers with a B. Sc. in the general Home Economics Program used Problem Solving more than did Majors in Clothing and Textiles. (Table 14)

Table 15

Analysis of Variance of Teacher Membership in Professional Organizations and the Use of Interviews

Source	SS	MS	df	F
Groups	5.65	1.88	3	3.25**
Error	43.44	0.58	75	

** $p \leq .05$

Significant differences ($p \leq .10$) ($F = 3.25$, $df = 3$) were found between

(a) Specialist Council of the ATA and both Specialist Council and AHEA.

(b) AHEA and both Specialist Council and AHEA.

The F-test was used to find whether there was any significant relationship between membership in professional organizations and use of teaching techniques. Use of interviews varied significantly ($p \leq .05$) according to membership in professional organizations.

The Scheffe´test showed significant differences ($p \leq .10$) between membership in the Specialist Council (Mean = 2.50) and membership in both the Specialist Council and AHEA ($p \leq .10$) (Mean = 1.88) and between membership in the AHEA (Mean = 2.75) and membership in both the Specialist Council and AHEA ($p \leq .1$) (Mean = 2.50). (Table 15)

Table 16

T-test of Yearly versus Semestered Programming and Frequency of Teacher Given Demonstrations

Group	N	Mean	sd	t
Yearly	24	3.92	.41	2.70**
Semester	51	3.43	.67	

** Significant at $p \leq .05$ (two-tailed test).

The t-test between yearly versus semestered programming and frequency of teacher given demonstrations yielded a significant difference ($p \leq .05$) ($t = 2.70$). Almost everyone in the yearly group said that they used this technique often (Mean = 3.92) whereas those in the semestered group were divided almost equally between those that did that occasionally and often (Mean = 3.43). (Table 16)

Table 17

Analysis of Variance of Class Load and
Use of Resource Persons

Source	SS	MS	df	F
Groups	5.58	1.86	3	4.85***
Error	29.49	0.38	77	

*** $p \leq .01$

Significant differences ($p \leq .05$) were found between class loads of:

(a) 6-12 students (Mean 2.25 and more than 20 students (Mean 3.44);

(b) 12-16 students (Mean = 2.69) and more than 20 students (Mean 3.44);

(c) 16-20 students (Mean = 2.69) and more than 20 students (Mean 3.44).

The F-test revealed a significant difference ($p \leq .01$) between class loads and the use of resource persons. The Scheffe test showed significant differences ($p \leq .05$) between class loads of more than 20 students (Mean = 3.44) and class loads of 12-16 students (Mean = 2.69) and 16-20 students (Mean = 2.69). (Table 17)

Table 18

Analysis of Variance of Class Load
and Use of Interviews

Source	SS	MS	df	F
Groups	60.02	2.00	3	3.48**
Error	43.09	0.57	75	

** $p \leq .05$

Significant differences ($p \leq .05$) were found between class loads of:

(a) 6-12 students (Mean = 1.25) and 16-20 students (Mean = 2.40);

(b) 6-12 students (Mean = 1.25) and more than twenty students (Mean = 2.67).

The analysis of variance between the Use of Interviews and class load yielded a significant difference at $p \leq .05$ ($F = 3.48$, $df = 3$).

The Scheffe' test yielded differences between the means ($p \leq .05$). Class loads of 16-20 students (Mean = 2.40) use Interviews between Seldom and Occasionally while class loads of 6-12 students use between Never and Seldom. Class loads of more than 20 students use interviews more (Mean = 2.67) than do class loads of 6-12 students (Mean = 1.25). (Table 18)

Table 19

Analysis of Variance Between Class Load and the Use of Laboratory Work

Source	SS	MS	df	F
Groups	5.31	1.77	3	8.25****
Error	16.74	0.21	78	

**** $p < .001$

Significant differences ($p < .01$) were found between class loads of:

(a) 6-12 students (Mean = 2.75) and 12-16 students (Mean = 3.73);

(b) 6-12 students and 16-20 students (Mean = 3.94);

(c) 6-12 students and more than 20 students (Mean = 3.78).

A significant relationship between class load and the use of laboratory work was noted at the $p < .001$ level. The Scheffe analysis of means showed that class loads of more than 20 students used laboratory work more often (Mean = 3.78) than did class loads of 6-12 students (Mean = 2.75). Class loads of 16-20 students (Mean = 3.94) used laboratory work often while class loads of 6-12 used it between Seldom and Occasionally. Class loads of 12-16 students (Mean = 3.73) used laboratory work between Occasionally and Often while class loads of 6-12 used it Seldom to Occasionally. (Table 19)

Table 20

Analysis of Variance Between Class Load and the Use of T.V. Programming

Source	SS	MS	df	F
Group	6.00	2.00	3	3.76**
Error	41.52	0.53	78	

** Significant to $p \leq .05$

Significant differences were found between class loads of:

(a) 6-12 students (Mean = 1.75) and 12-16 students (Mean = 2.82) ($p \leq .10$);

(b) 6-12 students and 16-20 students (Mean = 3.03) ($p \leq .05$);

(c) 6-12 students and more than 20 students (Mean = 2.89) ($p \leq .10$).

The F-test revealed a significant difference ($p \leq .05$) between class loads and the use of T.V. programming ($F = 3.76$, $df = 3$). The Scheffe test showed a significant difference ($p \leq .10$) between class loads of 12-16 students (Mean = 2.82) and loads of 6-12 students (Mean = 1.75). A significant difference ($p \leq .05$) existed between class loads of 16-20 students (Mean = 3.03) and loads of 6-12 students (Mean = 1.75). A difference significant to $p \leq .10$ existed between loads of more than 20 students (Mean = 2.89) and loads of 6-12 students (Mean = 1.75). (Table 20)

Table 21

Analysis of Variance Between Class Load
and the Use of VTR or TV Equipment

Source	SS	MS	df	F
Groups	9.18	3.06	3	3.12**
Error	76.44	0.98	78	

** $p \leq .05$

A significant difference ($p \leq .10$) was found between class loads of:

(a) 12-16 students (Mean = 2.00) and 16-20 students (Mean = 2.61).

The analysis of variance between class load and the use of VTR or TV Equipment was significant at $p \leq .05$ ($F = 3.12$, $df = 3$).

The Scheffe test yielded a significant difference ($p \leq .10$) between class loads of 12-16 students (Mean = 2.00) and class loads of 16-20 students (Mean = 2.61). (Table 21)

Table 22

Analysis of Variance Between Minutes of Scheduled Preparation Time and the Use of Symposia

Source	SS	MS	df	F
Groups	4.05	1.35	3	3.28**
Error	32.06	0.41	78	

** $p \leq .05$

A significant difference ($p \leq .10$) was found between times of 40-80 (Mean = 2.46) and 85-120 minutes (Mean = 3.13).

Analysis of variance between minutes of scheduled preparation time and the use of symposia yielded a significant difference at $p \leq .05$.

The Scheffe test showed a significant difference ($p \leq .10$) between 40-80 minutes (Mean = 2.45) and 85-120 minutes (Mean = 3.13). Teachers with 85-120 minutes of preparation time use symposia slightly more than occasionally while teachers with 40-80 minutes of preparation time use symposia between Seldom and Occasionally. (Table 22)

Table 23

Analysis of Variance Between Minutes of Scheduled Preparation Time and Role Playing

Source	SS	MS	df	F
Groups	7.93	2.64	3	4.62***
Error	44.07	0.57	77	

*** Significant to $p \leq .01$

A significant difference ($p \leq .01$) was found between preparation times of less than 40 minutes (Mean = 1.50) and 85-120 minutes (Mean = 2.78).

The analysis of variance between minutes of scheduled preparation time and role playing was significant at $p \leq .01$.

The only significant difference ($p \leq .01$) was found between teachers with less than 40 minutes of preparation time (Mean = 1.50) and those with 85-120 minutes of preparation time (Mean = 2.78). Teachers with 85-120 minutes of preparation time use role playing between Seldom and Occasionally whereas those with less than 40 minutes use role playing between Never and Seldom. (Table 23)

Table 24

Analysis of Variance Between Level Taught and Use of Written Reports

Source	SS	MS	df	F
Groups	8.09	4.05	2	9.48****
Error	33.71	0.43	79	

**** $p \leq .001$

A significant difference ($p \leq .001$) was found between Junior High (Mean = 2.79) and Senior High (Mean = 3.48).

Analysis of variance yielded a probability level significant at $p \leq .001$ between level taught and use of written reports.

The Scheffé test to identify significant differences between means showed that teachers of Senior High School use written reports significantly more often (Mean = 3.48) than do teachers of Junior High School (Mean = 2.79). (Table 24)

Table 25

Analysis of Variance Between Level Taught and Use of Role Playing

Source	SS	MS	df	F
Groups	7.34	3.67	2	6.33***
Error	44.65	0.58	77	

*** $p \leq .01$

A significant difference ($p \leq .01$) was found between Senior High (Mean = 1.72) and Junior High (Mean = 2.37).

The analysis of variance between the level taught and role playing was significant at $p \leq .01$.

Teachers of Junior High School use role playing between Seldom and Occasionally (Mean = 2.37) whereas teachers of Senior High use role playing between Never and Seldom (Mean = 1.72). (Table 25)

Table 26

Analysis of Variance Between Level Taught and Use of Skits

Source	SS	MS	df	F
Groups	3.57	1.78	2	4.28**
Error	32.53	0.42	78	

** $p \leq .05$

Significant differences ($p \leq .10$) were found between

(a) Senior High (Mean = 1.16) and Junior High (Mean = 1.55);

(b) Senior High and both Junior and Senior High (Mean = 1.78).

The analysis of variance yielded a significant difference ($p \leq .05$) between level taught and the use of skits.

Skits are seldom or never used. The Scheffé test showed a significant difference ($p \leq .10$) between Junior High and Senior High. Senior High teachers almost never use skits (Mean = 1.16) while teachers of Junior High use them between Seldom and Never (Mean = 1.55). Teachers teaching both Senior High and Junior High classes use skits slightly more (Mean = 1.78) than do teachers of Senior High (Mean = 1.16). (Table 26)

Table 27

Analysis of Variance Between Level Taught and the Use of Pantomimes

Source	SS	MS	df	F
Groups	5.30	2.65	2	6.45***
Error	32.06	0.41	78	

*** $p \leq .01$

A significant difference ($p \leq .01$) was found between Senior High (Mean = 1.24) and Junior High (Mean = 1.81).

The analysis of variance between level taught and the use of pantomimes was significant at $p \leq .01$.

The Scheffe test showed a significant difference ($p \leq .01$) at the low end of the continuum between Junior High (Mean = 1.88) and Senior High (Mean = 1.24). (Table 27)

Question #1 - Discussion

How do teachers of Home Economics perceive themselves as teaching, that is, what techniques do they use?

Background characteristics related to time, such as years of teaching experience, number of years since qualifying for teacher certification, years since courses were taken for credit and years of training beyond high school, were not significant factors in the use of teaching techniques. These characteristics are quantitative in nature. Area of specialization at University was a significant factor. It is a content related characteristic. Teachers with a general B.Sc. Home Economics degree use written reports and Problem Solving more often than teachers with a Foods and Nutrition major. The general degree program includes more social science courses than Foods and Nutrition which is more technical in nature. Possibly the teaching methods chosen reflect the methods by which these teachers were taught and the methods they were taught to use.

The nature of the schools and classes in which the teachers taught had an effect on the frequency of teacher given demonstrations. Teacher given demonstrations were used more significantly often ($p \leq .01$) on a yearly program than on a semestered program. More junior high schools are on the yearly program than senior high schools. Junior high Home Economics is concerned, among other things, with skill development. "When the objective is skill development and process learning, the technique (demonstrations) is particularly needed." (Spitz, 1970:22)

The class load made a significant difference ($p \leq .05$) on the use of resource persons, interviews, laboratory work, T.V. programming, and the use of VTR or TV equipment.

More resource people were used with larger classes. There is frequently a problem in scheduling one resource person to meet a number of different classes at one time. Some also may not be able to return a number of times to meet every class.

Spitze (1970:5) noted that fewer techniques are suitable for large groups than for small ones. Large group techniques (such as use of resource persons as guest speakers) do not usually permit active involvement of individual learners. A practical reason may also be that some resource persons prefer to speak to larger groups.

Teachers with larger class loads used laboratory work more frequently than teachers with smaller class loads. Class loads are relatively heavy at the junior high level, regardless of the facilities available, teachers provide as much laboratory experience as possible to facilitate skill development and discovery learning. The use of television programming and the use of VTR's and TV equipment are greater in larger classes.

Teachers with more scheduled preparation time use symposia and role playing more frequently than teachers with less preparation time. It seems reasonable to assume that teachers with more preparation time would have the opportunity to plan and organize symposia.

Role playing is a relatively new teaching technique for a great many teachers. Time is required to plan for the effective use of any new teaching technique.

The level taught influenced the use of written reports, role playing, skits and pantomimes. Teachers at the Senior High School level use written reports significantly more often than do teachers of

junior high school. This correlates with the finding that teachers use written reports more often on a semestered program. The curriculum guide presents a wide scope of the discipline and covers all three areas: Food Science, Clothing and Textiles, and Modern Living, at the junior high level. The emphasis is on skill development and understanding of major concepts. The courses at the high school level are more specific, the topics are more appropriate for in-depth written reports. This technique is readily evaluated and hence a useful vehicle for obtaining marks necessary for students to attain credits in the course at the high school level.

Role playing is used more often at the junior high level. This is in keeping with the curriculum. Role playing is frequently suggested for use in the development of basic concepts.

Skits and pantomimes are seldom used, however, they are used slightly more in junior high than in senior high. As with role playing, these techniques are time consuming and are useful in concept development most often at the junior high level. There is less mention in the curriculum guide and handbook of pantomimes and skits than of role playing.

Question #2

How do teachers of Home Economics perceive that the Curriculum and Handbook indicate they should teach?

Perceptions in answer to this question were recorded in Part B of each of the twenty-six teaching technique questions. The teachers responded by circling Considerable, Some, Little, Very Little, and Don't Know in answer to the request that they indicate the emphasis

they perceived is placed on each technique as indicated in the Curriculum Guide and Handbook.

Teacher background characteristics made a statistically difference ($p \leq .05$) in the use of five teaching techniques. These were; T.V. programming, case studies, student given demonstrations, written reports, and role playing.

The F-test of significance conducted on the variables; Years of Training Beyond High School, Years Since Qualifying for Teacher Certification, Years Since Courses Were Taken for Credit, Location of School, Yearly or Semestered program and class size, yielded no probability levels less than $p \leq .05$. This would seem to indicate that there is no significant difference between these background characteristics and the perceived emphasis in the curriculum guide and handbook on the twenty-six teaching techniques.

Table 28

Analysis of Variance of University Specialization and the Perceived Emphasis on T.V. Programming

Source	SS	MS	df	F
Groups	14.05	3.51	4	2.60**
Error	98.67	1.35	73	

** $p \leq .05$

A significant difference was found between teachers who majored in Foods and Nutrition (Mean = 2.00) and teachers with a general B.Sc. degree (Mean = 3.50).

The analysis of variance showed a significant difference ($p \leq .05$) between area of University specialization and the perceived emphasis in the curriculum on T.V. programming.

The Scheffe test showed that teachers with a general B.Sc. degree perceived between little and some emphasis on T.V. programming whereas those who majored in Foods and Nutrition perceived very little emphasis.

Table 29

Analysis of Variance of Years of Teaching Experience and Perceived Emphasis on Case Studies

Source	SS	MS	df	F
Groups	10.06	2.52	4	2.82**
Error	66.94	0.89	75	

** $p \leq .05$

A significant difference was found between teachers with one year of experience (Mean = 3.00) and teachers with 6-9 years of experience (Mean = 4.20).

The analysis of variance between Years of Teaching Experience and Perceived Emphasis on Case Studies was significant to $p \leq .05$.

The Scheffe' test revealed that teachers with 6-9 years of experience perceive slightly more than some (Mean = 4.20) emphasis on case studies while those with one year of experience perceive little emphasis.

Table 30

Analysis of Variance of Years of Teaching Experience and Perceived Emphasis on Student Given Demonstrations

Source	SS	MS	df	F
Groups	19.33	4.83	4	3.54**
Error	100.98	1.36	74	

** $p \leq .05$

Significant differences ($p \leq .05$) were found between

(a) Two years (Mean = 2.10) and 6-9 years (Mean = 3.73);

(b) Two years and more than nine years (Mean = 3.57).

The analysis of variance of Years of Teaching Experience and perceived emphasis on Student Given Demonstrations was significant at $p \leq .05$.

The Scheffe' test revealed significant differences ($p \leq .05$) between teachers with two years and teachers with 6-9 years of experience. Teachers with 6-9 years of experience perceive little-some emphasis (Mean = 3.73) on student given demonstrations while those with two years perceive very little (Mean = 2.10) emphasis. Teachers with more than nine years of experience also perceive between little and some emphasis (Mean = 3.57) while those with two years perceive very little emphasis.

Table 31

Analysis of Variance of Membership in Professional Organizations and Perceived Emphasis on Student Given Demonstrations

Source	SS	MS	df	F
Groups	13.90	4.63	3	3.27**
Error	106.40	1.42	75	

** $p \leq .05$

A significant difference ($p \leq .05$) was found between membership in the Home Economics Specialist Council (Mean = 3.63) and membership in both the Specialist Council and AHEA (Mean = 2.56).

The analysis of variance of membership in professional organizations and perceived emphasis on student given demonstrations was significant at $p \leq .05$.

The Scheffe test ($p \leq .05$) showed that teachers who were members of the Home Economics Specialist Council of the ATA perceived little-some emphasis (Mean = 3.63) while those who were members of both the Specialist Council and AHEA perceived between little and very little emphasis (Mean = 2.56).

Table 32

Analysis of Variance of Minutes of Scheduled Preparation Time and Perceived Emphasis on Written Reports

Source	SS	MS	df	F
Groups	7.14	2.38	3	3.42**
Error	53.55	0.70	77	

** $p \leq .05$

A significant difference ($p \leq .05$) was found between 40-80 minutes (Mean = 3.58) and 85-120 minutes (Mean = 4.56).

The analysis of variance of minutes of scheduled preparation time and perceived emphasis on written reports was significant at $p \leq .05$.

The Scheffe test ($p \leq .05$) showed that teachers with 85-120 minutes of scheduled preparation time perceived some-considerable emphasis (Mean = 4.56) while those with 40-80 minutes perceived little-some emphasis (Mean = 3.58).

Table 33

Analysis of Variance of Minutes of Scheduled Preparation Time and Perceived Emphasis on Role Playing

Source	SS	MS	df	F
Groups	13.27	4.42	3	3.64**
Error	91.09	1.21	75	

** $p \leq .05$

Significant differences ($p \leq .10$) were found between

(a) Less than 40 minutes (Mean = 2.80) and 85-120 minutes (Mean = 4.22)

(b) 40-80 minutes (3.04) and 85-120 minutes.

The analysis of variance of minutes of scheduled preparation time and perceived emphasis on role playing was significant at $p \leq .05$.

The Scheffe test, conducted to identify significant differences between means, yielded significant differences at ($p \leq .10$). Teachers with 85-120 minutes of scheduled preparation time perceived slightly more than some emphasis (Mean = 4.22) on role playing while those with less than 40 minutes perceived between little and very little emphasis (Mean = 2.80). Teachers with 40-80 minutes perceived little emphasis (Mean = 3.04) while those with 85-120 minutes perceived slightly more than some (Mean = 4.22) emphasis on role playing.

Table 34

Analysis of Variance of Level Taught
and Perceived Emphasis on Role Playing

Source	SS	MS	df	F
Groups	12.33	6.17	2	5.36**
Error	86.35	1.15	75	

** $p \leq .05$

A significant difference ($p \leq .01$) was found between Junior High (Mean = 3.65) and Senior High (Mean = 2.78).

The analysis of variance of level taught and perceived emphasis on role playing was significant at $p \leq .05$.

The Scheffe test revealed a significant difference ($p \leq .01$) between teachers of Junior High and teachers of Senior High. Teachers of Junior High perceived between little and some emphasis on role playing (Mean = 3.65) while teachers of Senior High perceived between little and very little emphasis (Mean = 2.78).

Discussion of Question #2

Teacher perceptions of emphasis in the curriculum of teaching techniques were not significantly affected by quantitative characteristics of years of training beyond high school, years since qualifying for teacher certification or years since courses were taken for credit. Three factors related to the schools in which they taught also did not significantly affect their perceptions of emphasis. These include: location of school, yearly or semestered program and class size.

Teachers with a major in Foods and Nutrition perceived less emphasis on T.V. programming than teachers with a general B.Sc. degree. This may be a reflection of the content of the two areas. Possibly the teachers also teach in their respective areas. There is less emphasis in the curriculum on T.V. programming in Food Science than there is in Modern Living or Clothing and Textiles.

Years of teaching experience made a difference in the perception of emphasis on the use of case studies and on student given demonstrations. Teachers with more experience perceived more emphasis on each of these techniques.

Members of only the Home Economics Specialist Council of the ATA perceived more emphasis on student given demonstrations than those who were members of both the Council and the Alberta Home Economics Association.

Teachers with more preparation time perceived more emphasis on written reports and role playing. High school teachers may have more preparation time. This would correlate with the finding that written reports are used more often at the high school level. Teachers with more preparation time would have more time to read the curriculum and

be familiar with the emphasis on role playing.

Teachers of junior high perceived more emphasis on role playing. There is more role playing in the junior high portion of the curriculum guide than in the senior high. Presumably, the teachers would be most familiar with the part of the curriculum devoted to the level they taught.

Question #3

What reasons are indicated to account for differences between teachers as to how they perceive themselves as teaching and how they believe they are expected to teach?

Pearson product-moment correlation coefficients were calculated between both parts of each of the twenty-six teaching technique questions to determine whether there was any relationship between the perceptions of teachers as to the techniques they use and their perceptions of the emphasis they placed on these techniques in the curriculum guide and handbook (Table 35). No causality is inferred. A high positive or negative correlation would require further study to determine the reason for the relationship.

The highest correlations occurred between use and emphasis for the techniques of debate ($r = .556$), skits ($r = .543$), committee work ($r = .590$), interviewing ($r = .593$), teacher centered instruction ($r = .522$), Pantomimes ($r = .686$) and Music ($r = .522$). The lowest correlations were between use and emphasis of programmed instruction ($r = .301$), discovery learning ($r = .307$) and field trips ($r = .271$).

Table 35. Pearson r - Correlation Between Use and Emphasis in Curriculum for each Technique

Techniques	Opinion and Emphasis	Correlation	Probabilities
1.	Panel Discussions	0.481	0.000
2.	Symposium	0.494	0.000
3.	Debate	0.556	0.000
4.	Programmed Instruction	0.301	0.006
5.	Staff Involvement	0.430	0.000
6.	Written Reports	0.351	0.001
7.	Oral Reports	0.353	0.001
8.	Higher Order Questioning	0.102	0.356
9.	Individual Study	0.369	0.001
10.	Skits	0.543	0.000
11.	Role Playing	0.444	0.000
12.	Case Study	0.336	0.002
13.	Committee Work	0.590	0.000
14.	Resource Persons	0.195	0.077
15.	Interviews	0.593	0.000
16.	Teacher Centered Instruction	0.522	0.000
17.	Discovery Learning	0.307	0.005
18.	Group Work	0.455	0.000
19.	Teacher Given Demonstrations	0.318	0.003
20.	Student Given Demonstrations	0.449	0.000
21.	Pantomime	0.686	0.000
22.	Field Trips	0.271	0.013

Table 35 (continued)

Opinions and Emphasis	Correlation	Probabilities
23. Laboratory Work	0.407	0.000
24. Use of VTR or T.V. Equipment	0.473	0.000
25. Television Programming	0.441	0.000
26. Music	0.522	0.000

Discussion

Three teachers commented that they used skits mainly in Modern Living. Two teachers noted that their use of interviews was confined to the students interviewing their parents only.

A number of comments were made in regard to Field Experiences. Five teachers cited lack of financial resources for field trips, five expressed a lack of time for taking their classes out or a problem of scheduling, five noted distance from populous centers as a reason for not going on field trips.

Summary

Forty percent of the teachers used some of the techniques occasionally. Twenty-four percent seldom used some of the techniques, and twenty-three percent often used some of the techniques. Thirteen percent never used some of the techniques.

Higher order questioning, individual study, discovery learning, teacher given demonstrations and laboratory work were used often. Skits, pantomimes and music were the techniques most often indicated as never used.

Forty-three percent of the teachers perceived some emphasis in the curriculum of most of the techniques. Eleven percent did not know what emphasis was placed on some of the techniques. These were staff involvement, skits, pantomimes and the use of music. The greatest emphasis was perceived to be on higher order questioning, individual study, teacher given demonstrations and laboratory work.

The null hypothesis was accepted for the factors of Years of Training Beyond High School, Location of School, and Years Since Qualifying for Teacher Certification. The null hypothesis was rejected

for the remaining factors; i.e., Areas of Specialization, Years of Teaching Experience, Years Since Courses were taken for Credit, Membership in Professional Organizations, School Program Scheduling, Class Loads, Minutes of Scheduled Preparation Time and Teaching at the Junior or Senior High School Level.

The teachers in the sample indicated statistically significant ($p \leq .05$) use of twelve teaching techniques; symposiums, written reports, problem solving, teacher given demonstrations, interviews, resource persons, laboratory work, video-tape or television equipment, television programming, role playing, skits and pantomimes.

Question #2 - "How do teachers of Home Economics perceive that the Curriculum and Handbook indicate they should teach?"

Teacher background characteristics did make a significant difference in the perceptions of emphasis on five teaching techniques, namely: T.V. programming, case studies, student given demonstrations, written reports and role playing.

The perception of emphasis on these techniques was significantly affected ($p \leq .05$) by Area of University Specialization, Years of Teaching Experience, Membership in Professional Organizations, Minutes of scheduled preparation time and whether they taught Junior or Senior high school.

Teacher background characteristics of years of Training Beyond High School, Years Since Qualifying for Teacher Certification, and Years Since Courses Were Taken for Credit, were not significant factors ($p \leq .05$) in teacher perceptions of how the Curriculum and Handbook

indicate that they should teach.

The characteristics of the schools in which they taught, including location of the school, whether it was on a yearly or a semestered program, and the class loads, were not significant factors ($p \leq .05$) in the perceptions of teachers of emphasis in the curriculum.

Question #3

What reasons are indicated to account for differences between teachers as to how they perceive themselves as teaching and how they believe they are expected to teach?

Pearson product-moment correlation coefficients calculated between both parts of each of the twenty-six questions on teaching techniques yielded the highest correlations between use and emphasis for the techniques of debating, skits, committee work, interviews, teacher centered instruction and pantomimes. The lowest correlations were between use and emphasis of programmed instruction, Problem Solving and field trips.

Teacher comments provided possible reasons for the higher and the lower correlations. Most frequent were comments regarding field experiences. The low correlation ($r = .271$) may be due to lack of financial resources, lack of time, difficulty in scheduling, and distance from populous centers.

CHAPTER V

SUMMARY AND CONCLUSIONS

This concluding chapter begins with a review of the problem and the procedures used. A summary of results will be given followed by implications and recommendations for a number of groups with an interest in Home Economics education. The chapter will conclude with suggestions for further research.

Review of the Problems and Procedures

The Alberta Home Economics curriculum introduced in 1972 included a number of suggestions for teaching techniques appropriate for the use of that curriculum. Indications were that not all teachers were using the curriculum. Home Ecomomics Education research in Alberta supported this observation. Previous studies were essentially of attitudes to the subject of Home Economics and the curriculum.

The present study was a perceptual investigation in which teacher perceptions of how they teach, that is, what techniques they use, and how they are expected to teach, were measured. Twenty-six teaching techniques were identified in the Curriculum Guide and accompanying handbook. These techniques were described in twenty-six questions to which a random sample of Home Economics teachers in Alberta responded. Provision was made for comments and possible reasons for discrepancies between actual use of techniques and techniques perceived to be required to be used.

The mailed questionnaire was responded to by 63.6% of the sample.

The questionnaire consisted of two main sections. The first section dealt with background information pertaining to the teachers and the schools in which they taught. The second section was composed of the twenty-six questions regarding specific teaching techniques. This section was in a modified Likert format. Each question was in two parts. Part (a) queried the use made by teachers of the specific technique and part (b) queried the perception by the teacher as to the emphasis placed on the use of that technique in the curriculum. Space was provided following each part of each question for written comments by the respondents.

The questionnaire was pretested by a group of teachers representative of the sample. The pre-test was administered personally by the researcher in individual sessions. Minor changes were made to the original questionnaire.

Data were collected in March, 1977 by mail questionnaires. The responses were assigned identification numbers and following key punching, were tabulated and analyzed via a computer.

The Statistical Package for the Social Sciences (SPSS) provided frequencies, percentages and a factor analysis of the responses. SPSS was also used for the T-test of significance between two means.

The Division of Educational Research System (DERS) computer program was used for F-tests of significance, the Scheffe' one-way analysis of variance and the Pearson product-moment correlations.

Measures at the 0.05 and 0.01 level were reported as being significant and were interpreted.

SUMMARY OF RESULTS

H_o1: The following factors were not statistically influential in the use by teachers of some or all of the twenty-six teaching techniques identified.

1. Years of training beyond high school
2. Area of Specialization at University
3. Number of years since qualifying for teacher certification
4. Years of teaching experience
5. Years since courses were taken for credit
6. Membership in professional organizations
7. Location of school
8. School program scheduling
9. Class loads
10. Minutes of scheduled preparation time
11. Teaching at the Junior or Senior High School level

The use of twelve of the twenty-six teaching techniques were significant by ($p \leq .05$) identified as related to teacher and school background characteristics.

The F-test of significance ($p \leq .05$) resulted in the acceptance of the null hypothesis for factors: (1) years of training beyond high school, (2) Number of years since qualifying for teacher certification, (3) Years of teaching experience, (4) Years since courses were taken for credit and (6) Location of school. The null hypothesis was rejected for the remaining six factors.

Question #2: How do teachers of Home Economics perceive that the Curriculum and Handbook indicate they should teach?

Teacher background factors: Areas of Specialization at the University, number of years of teaching experience, number of years since courses were taken for credit, membership in professional organizations, school programming schedules, minutes of scheduled preparation time, and grade level taught, were all significant ($p \leq .05$) in the perceptions of emphasis in the curriculum.

Question #3: What reasons are indicated to account for differences between teachers as to how they perceive themselves as teaching and how they are expected to teach?

Pearson product-moment correlation coefficients indicated consistency in twenty-four of the twenty-six techniques. That is, teachers perceiving strong emphasis on a technique indicated in the curriculum also tended to use that technique often.

Reasons for differences in teacher perceptions are indicated in the teacher and school background characteristics. Written comments revealed factors of resource availability also to be pertinent in the use of teaching techniques.

IMPLICATIONS AND RECOMMENDATIONS

Findings from this study yielded implications worthy of consideration by those groups and individuals concerned with Home Economics education. Specific implications and recommendations are cited for: Principals of Alberta Schools, The Alberta Department of Education, the Faculty of Education of the University of Alberta, the Secondary Curriculum Committee on Home Economics, and for teachers of Home Economics.

Implications for Inservice .(Conventions, Conferences, Professional Development Days, Workshops)

Further information and training in the teaching techniques not frequently used may provide more familiarity with these techniques leading to their greater use. This would add to the variety of techniques used and enhance the program.

Implications for Principals

Factors of teacher preparation time, school program scheduling, class loads, and availability of resources were all cited as significant in the use of teaching techniques by Home Economics teachers. School time-table scheduling would facilitate the Home Economics program at the Junior High level if classes were scheduled frequently, that is, more often than once per week or six day cycle, and if these class periods were of at least an eighty minute duration. Home Economics need not always be scheduled at the same time as Industrial Arts. This is particularly so since Home Economics is open to both boys and girls. Home Economics is most effectively taught if class loads fit the available laboratory space.

Implications for the Alberta Department of Education

Factors of teacher preparation time, school program scheduling, class loads, and availability of resources were all cited as significant in the use of teaching techniques. Considerable variety in these factors for various schools was noted. If a curriculum which has been adopted by the department of education is to be fully implemented and if the concept of equality of education is to be adhered to, then it

would seem that factors propitious to implementation should be given emphasis.

The curriculum was introduced in 1972 and followed by a handbook and workshops. The attendance at the workshops, while high, was voluntary. More assistance for teachers in understanding and implementing the curriculum could be facilitated.

Implications for Faculty of Education

Findings of this study seemed to indicate a lack of understanding by some teachers of the nature of a curriculum based on spiralling concepts. It is possible for a student to enter the program at the grade eight or nine level without having taken Home Economics in the previous grades.

Teachers use the techniques of higher order questioning, individualized study, problem solving, teacher given demonstrations, and laboratory work, most often. Emphasis could be placed on expertise in the use of these techniques by student teachers.

A number of teachers commented that there was not enough time for the use of many of the teaching techniques. Perhaps this means that they see the use of a variety of techniques as additional to, rather than central to teaching a conceptually based program in which the emphasis is on student initiated learning.

Implications for Secondary Curriculum Committee on Home Economics

Respondents indicated that use of the techniques varied depending on factors such as grade level taught, specific subject area, and available resources. These factors should be taken into con-

sideration in future revisions of the curriculum. These needs could be met, in part, by the adoption of specific textbooks and references.

Teachers of Home Economics

A survey of the curriculum would reveal that the teaching techniques are suggested for and useful in, all three subject areas: Food Science, Modern Living and Clothing and Textiles. Implementation of new teaching techniques may help to alleviate problems related to lack of resources, class loads, and lack of time. Students grasp a concept more readily when they are actively involved in the learning of it.

Membership in professional organizations provides for a sharing of teaching ideas and techniques with colleagues as well as an up-date in subject area content.

Increased interaction with all staff members may facilitate suggestions and arrangements for resource people and field trips.

SUGGESTIONS FOR FURTHER RESEARCH

This study could be replicated with the inclusion of a number of considerations:

1. What is the relationship between the level of satisfaction experienced by teachers in teaching Home Economics and their use of the various teaching techniques?
2. Which of the techniques are used more frequently with boys' classes? girls' classes? and lower ability classes?

3. Which techniques are used most for each of the specific areas in Home Economics and for the various grade levels?
4. What non-credit courses have Home Economics teachers taken which they feel are valuable in the teaching of Home Economics?
5. Where were the Home Economics teachers in Alberta trained?
6. What techniques do students in the schools prefer?
7. What techniques do principals and staff perceive the Home Economics teachers as using?

There may be a relationship between Home Economics teachers' management of their area and their use of teaching techniques. Concerns related to effective management could include:

1. How do budgets available to Home Economics teachers vary? What amounts are allocated? Does the teacher have autonomy in budget management? What level of efficiency is demonstrated in that management?
2. What human and non-human resources are available to the Home Economics teachers in Alberta? Are these resources significant factors in the success of their Home Economics programs?

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APPENDICES

APPENDIX 1

A Sample Program for Bachelor of Education
Students Majoring in Home Economics in 1977

APPENDIX 1

Students majoring in Home Economics in a Bachelor of Education program in 1977 may follow this program:

First Year:

1. Chemistry 250 (a non-education option, full course)
2. Clothing and Textiles 200 and 203
3. Ed. Adm. 261, Ed. Fdn. 201
4. Ed. Psy. 269, Ed. Psy. 271
5. Free option, full course equivalent

Second Year:

1. CI tx 307 and one other CI tx course
2. Fd Nu 320 and 321
3. Fam 340 and 350
4. Non-ed. Option, full course equivalent
5. Free option, full course equivalent

Third Year:

1. Non-ed. option, full course equivalent
2. Fd Nu 325 and 327
3. Student teaching -full course equivalent
4. Ed. CI 382 and 383
5. Free option (could be Ed. CI 384 or 484)

Fourth Year:

1. Two additional single courses in Family Studies
2. Two other courses in Home Economics

3. Basic Education - full course equivalent could be in Ed. Psy., Ed. Fdn., or Ed. Adm.)

4. Free option, Full course equivalent

5. Free option, Full course equivalent

The provision for the equivalent of one full year of course work permits the student to strengthen her major, to build a second major, or to establish a solid base in one of the foundations of education.

APPENDIX 2

The Secondary Route Program offered
Prior to 1971

APPENDIX 2

The Secondary Route Program offered Prior to 1971

Secondary Route Program

First Year

1. Ed. Fdn. 201 and Ed. Adm. 261
2. Ed. Psy 269 and 271
3. English 200* or 210
   *English majors must elect English 200.
4. Major
5. Approved Arts or Science option
6. Physical Education 218 (men) or 228 (women)

Second Year

(For special transfer second year, secondary route, see C below.)

1. Approved Social Science or History
2. Curriculum and Instruction (Major Field)
3. Ed. CI 250
4. Major
5. Major or Arts or Science option

Third Year

1. Ed. Psy. 471 and one other half course in Ed. Psy.
2. Phil. 240, or Phil 242
3. Senior Education option
4. Major
5. Major or Arts or Science option

Fourth Year

1. Ed. Fdn. 492 or 496
2. Senior Education option
3. Major
4. Major or Arts or Science option
5. Major or Arts or Science option

Faculty of Education Calendar

APPENDIX 3

Evaluation

APPENDIX 3

Evaluation

A Total Evaluation Model

Systems theory has had an influence on program evaluation. A system is best understood with the help of a model indicating factors affecting the input, throughput and output of the program. One administrative model reflecting the systems approach developed by Stufflebeam illustrates features common to current evaluation models. This model, (Figure 1) is described as a total evaluation model. It provides for systematic context evaluation and ad hoc input, process and product evaluations. The systematic context evaluation overcomes the inadequacy of an ad hoc evaluation. Ad hoc evaluations are studies which may be ineffective because of their hit and miss nature, there is a lack of unity between the studies. They are not an inherent part of the evaluation process, therefore the findings may or may not be of significance.

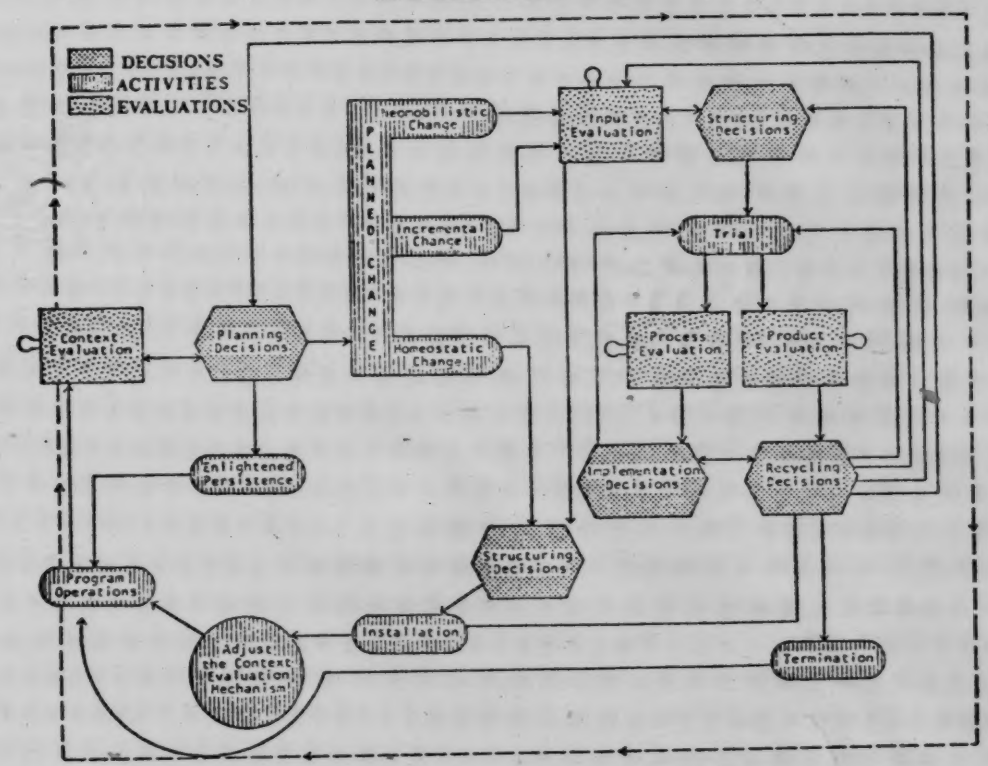
Note that the context evaluation encompasses the entire process. "If the context evaluation indicates no discrepancies between the intentions and actualities or between possibilities and probabilities, the planning body might feel confident to continue at the same level" (Stufflebeam, p. 235). No change in evaluation or planning would be indicated. If change is indicated it could be one of three types:

1. Homeostatic, based on decisions to effect a small change supported by a high level of relevant information grasp by the program personnel,

2. Incremental change based on decisions to effect a small change supported by an initially low level of relevant information grasp,

3. Neomobilistic change based on decisions to effect a large change supported by an initially low level of relevant information grasp.

An Evaluation Model



(Stufflebeam, 1971, p. 236)

Figure 1

The evaluation measures used will depend on the type of change. Outside evaluation is not needed when the change is homeostatic. The program personnel already have the necessary information. Ad hoc evaluation would be needed for incremental and neomobilistic change. There is inadequate information in the existing system to support these kinds of changes.

The second half of the model shows the procedure for carrying out the ad hoc evaluation. The initial step is input evaluation to plan strategies and procedures to make the desired changes. The resulting structuring decisions lead to a trial or pilot test. Decisions on whether to implement or recycle are based on both process and product evaluation. As noted in the model, structuring decisions can be installed without a trial run.

All evaluation models should be methodological. They should delineate, obtain, and provide information.

Roles and Goals of Evaluation

"A number of models have been developed each reflecting the background and concerns of the authors." (MacKay, p. 16) Some general information as to the nature of evaluation is useful prior to an examination of these models. Most important is a consideration of the role to be played by an evaluation:

> Is it to be a part of a teaching activity, of the process of curriculum development, of a field experiment connected with the improvement of learning theory, of an investigation preliminary to a decision about acceptance or rejection; it may be a data gathering activity for supporting a request for tax increases or research support, or a preliminary to the reward or punishment of people as in an executive training program, a prison or a classroom. (Scriven, p. 41)

Scriven voices a concern for the recent tendency of evaluators to play down the goals and emphasize only the roles of evaluation. He makes the point that to soft-peddle the goals of evaluation does no one any good over the long term. If indeed an evaluation is to determine the decision of whether or not a teacher will be employed for another year, hiding the reality will not change the fact.

An essential part of a system is feedback. Prior to an evaluation, decisions must be made regarding whether an evaluation of the process or of the product is required. In other words, what will be the role of the evaluation? Formative evaluation is carried on during a program. A distinct advantage is that any aspect of a program can be altered to improve the situation immediately. This also provides an opportunity to evaluate the new modification and its effects on the total system while the system is in operation. Formative evaluation is qualitative in nature.

Summative evaluation is done at the conclusion of a program to determine the overall effectiveness. Summative evaluation is quantitative and involves some form of measurement. Measurement produces evidence as a basis for evaluation and becomes a part of the evaluative process when interpreted in the light of a particular objective and a given situation. (Cross, 1973, p. 7)

Both summative and formative evaluation must be included in the total evaluation of a system. Much of the literature deplores the absence of this combination in early evaluation efforts.

Some Current Evaluation Models

Provus (1971) has developed a discrepancy model for program evaluation. He defines program evaluation as:

1. Defining program standards;

2. Determining whether a discrepancy exists between some aspect of program performance and the standards governing that aspect of the program; and

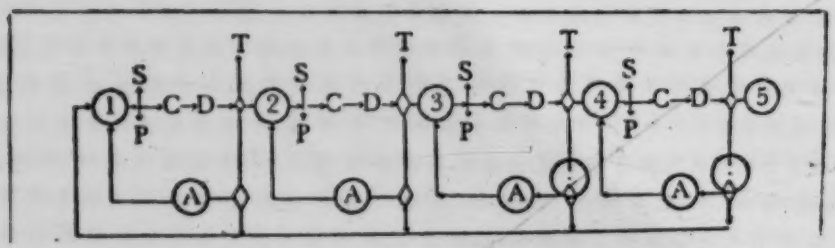
3. Using discrepancy information either to change performance or to change program standards.

(Provus, p. 183)

Discrepancy evaluation is conducted when the program is already staffed and underway. Five stages are identified, the first four taking place within the program. The fifth stage, if used, involves a second program for comparative purposes. The content section of the discrepancy evaluation outlines the categories to be evaluated in each stage (Figure 2). The comprehensive nature of this model is evidenced by the evaluation of the input, process and output in each of the five stages. As is illustrated in Figure 2,

> The process of evaluation consists of moving through stages and content categories in such a way as to facilitate a comparison between program performance and standards while at the same time identifying standards to be used for future comparisons. (Provus, p. 184)

Stages	Content		
	Input	Process	Output
1. Design	Design Adequacy		
2. Installation	Installation Fidelity		
3. Process	Process Adjustment		
4. Product	Product Assessment		
5. Program Comparison	Cost-Benefit Analysis		



(Provus, 1971, p. 184)

Figure 2

The following table facilitates the understanding of the model:

S = Standard

P = program performance

C = compare

D = discrepancy information

A = change in program performance or standards

T = terminate

The recognition of a discrepancy at the end of each stage necessitates a decision before entering the next stage. The decision could be to:

1. Go on to the next stage;
2. Recycle the stage after there has been a change in the program standards or operations;
3. Recycle to the first stage;
4. Terminate the project.

Stake (1967) specifies that an evaluation of a school program should portray the merit and fault perceived by well-defined groups, systematically gathered and processed. This judgment data and description data are both essential to the evaluation of educational programs.

In his model, the Stake Congruence-Contingency Model, data is gathered from three bodies of information: (Figure 4)

1. Antecedents - the conditions existing prior to the program or situation. The antecedents emphasized will depend upon the purpose of the evaluation. If it is to determine the use of resources, the number, condition and state of resources will be

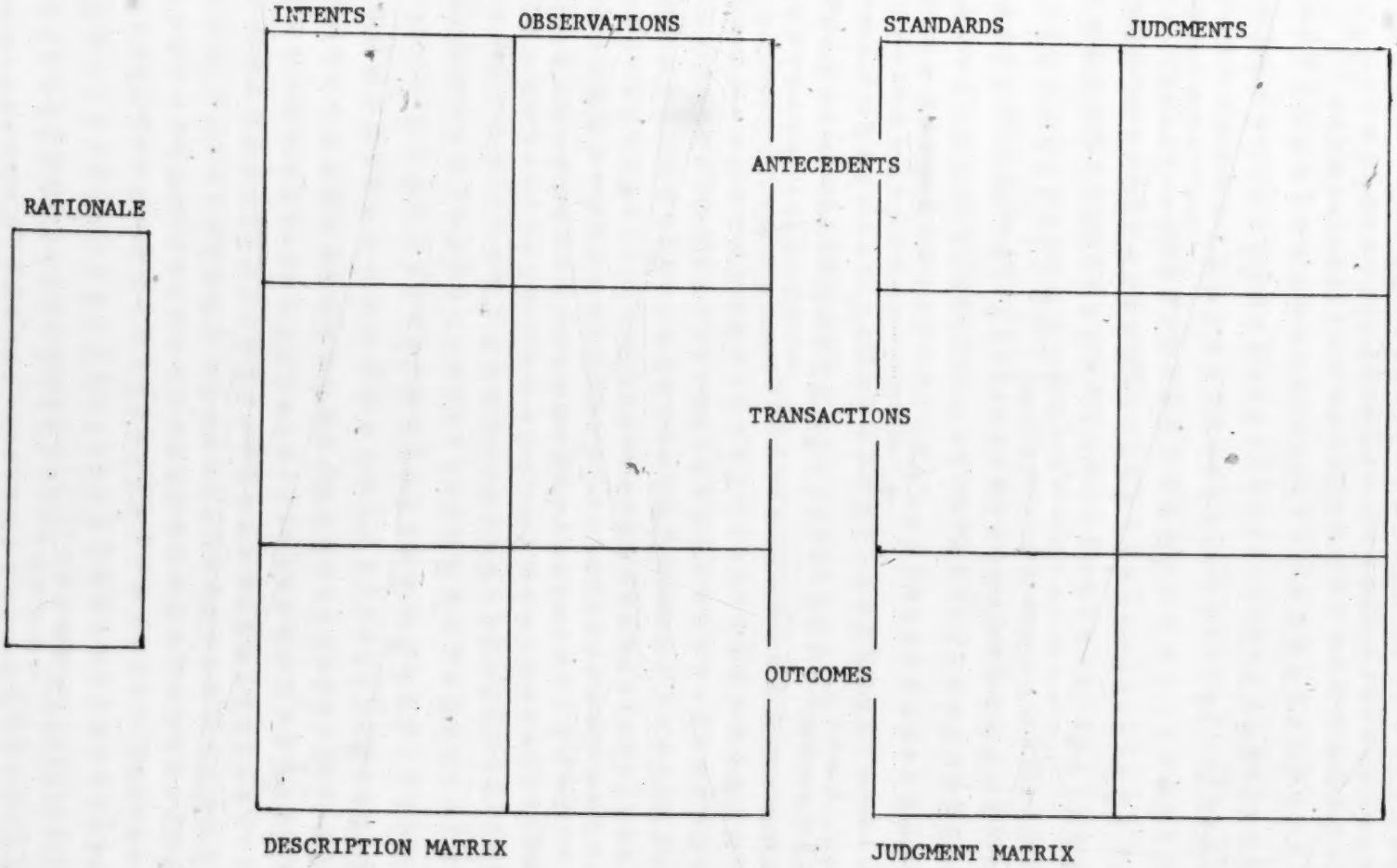


Figure 4. A layout of statements and data to be collected by the evaluator of an educational program.

described. If it is to determine the need for laboratories, existing laboratories will be described in terms of class loads, equipment, and work patterns.

2. Transactions - these are dynamic, the interactions between people and objects.

3. Outcomes - include ". . . not only those that are evident or even existent, as the program ends but includes applications, transfer and relearning effects which may not be available for measurement until long after."

   Outcomes are the consequences.

There is a place for Antecedents, transactions and outcome data in both the description and the judgment matrices as indicated in Figure 4.

The second stage in the Stake Model is the processing of the data, Figure 5. It is processed in two ways:

1. Finding the contingencies between antecedents, transactions and outcomes, and

2. Finding the congruence between the Intents and the Observations.

Stake declares that

> . . . in the sense that evaluation is the search for relationships that permit the improvement of education the evaluator's task is one of identifying outcomes that are contingent upon particular antecedent conditions and instructional transactions. (Stake, p. 60)

Figure 6, illustrates the third stage in the model, the process of judging the merit of an educational program. Basically a program can be judged in two ways: (1) with respect to absolute standards as

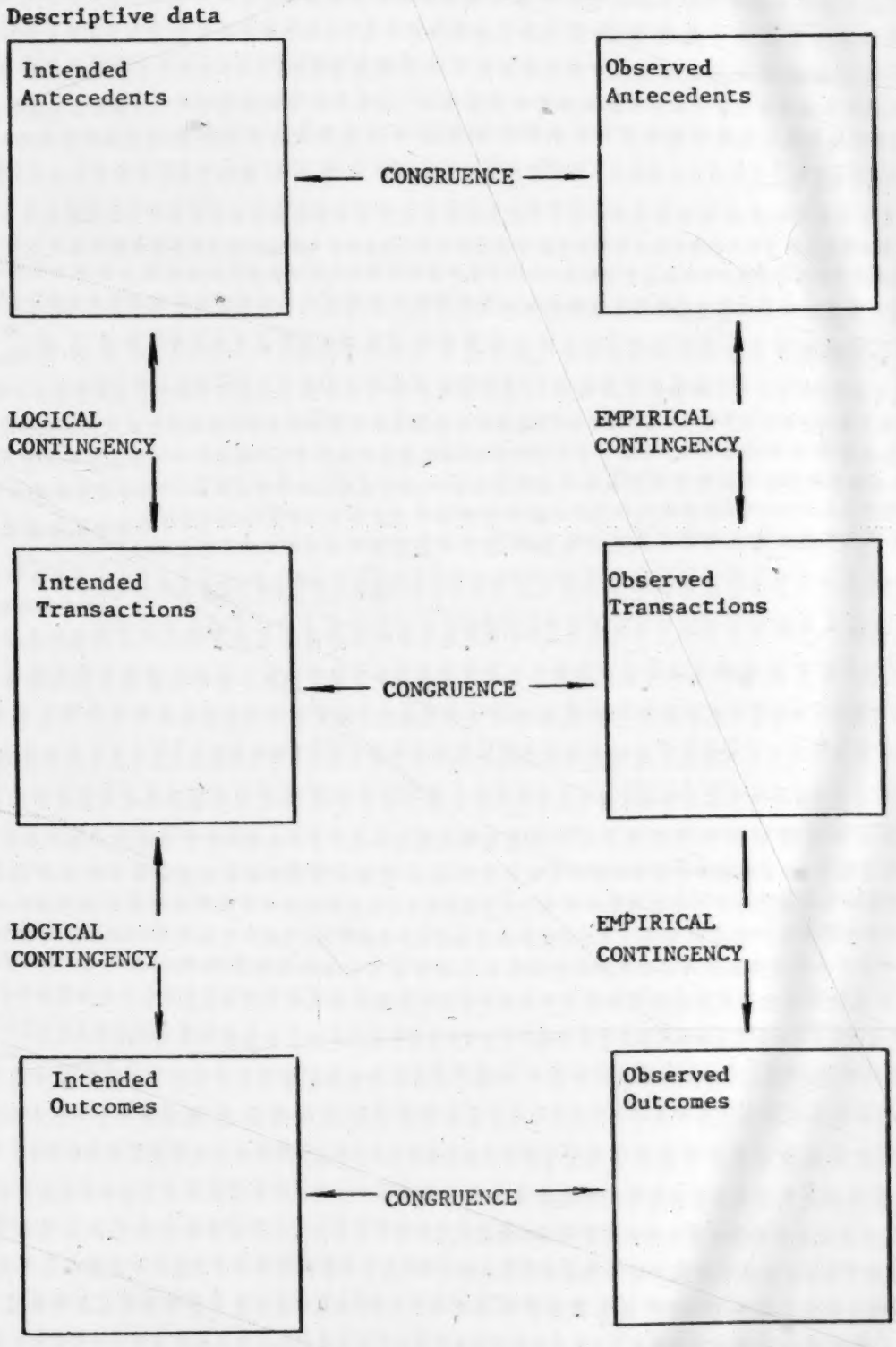


Figure 5. A representation of the processing of descriptive data.

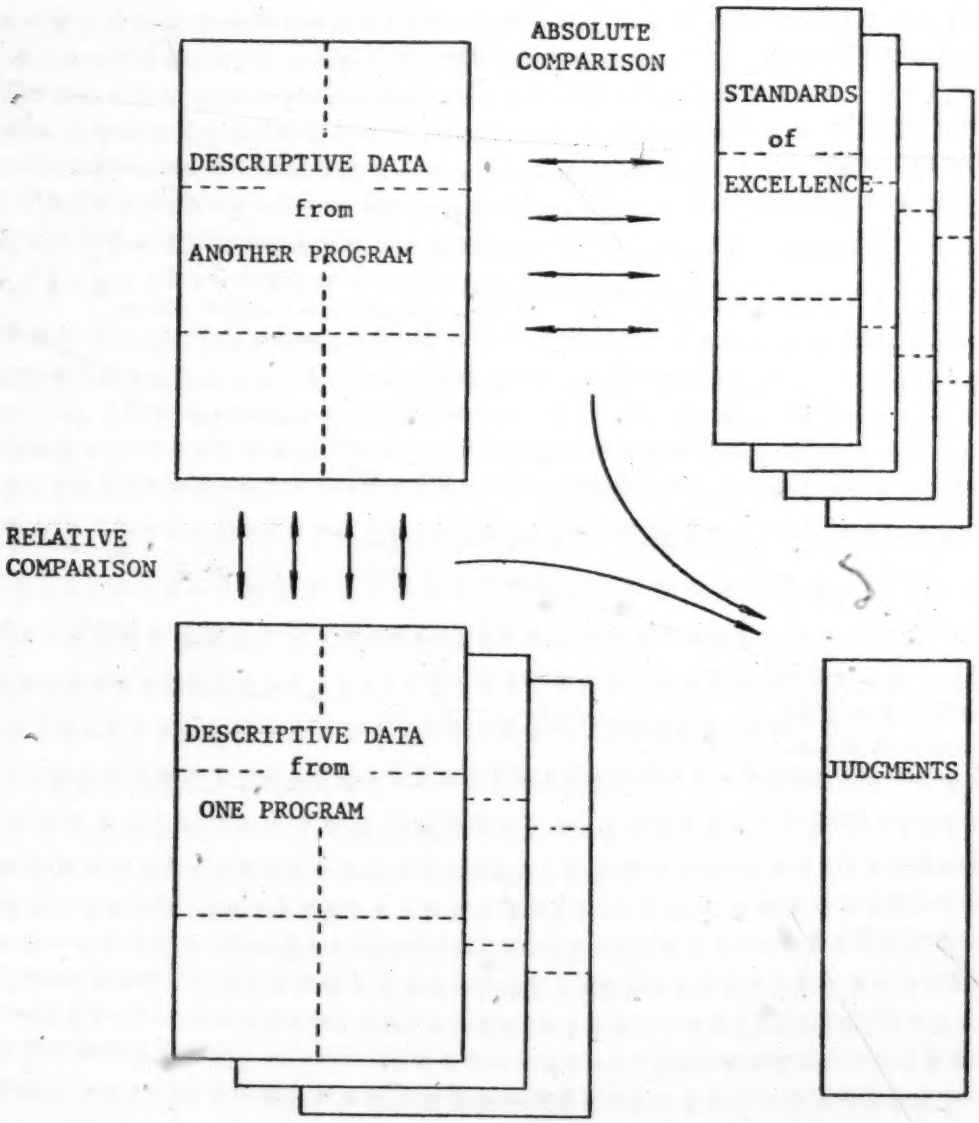


Figure 6. A representation of the process of judging the result of an educational program.

reflected by personal judgments, and (2) with respect to relative standards as reflected by characteristics of alternative programs. The summative evaluator would emphasize this third stage whereas the formative evaluator would be most interested in the contingencies of the second stage.

Current evaluations still leave much to be desired. The three models described in this paper are comprehensive. Each model would yield a thorough evaluation if at each stage of the process the appropriate measuring instruments existed and were applied by people who had expertise in that particular area which they were measuring. Stufflebeam makes grim reference to this problem, "Those data for which instruments happen to be available are the most likely to be obtained, regardless of their real relevance." (P. 30)

A second problem involves evaluation personnel. Stake envisions a team of social scientists being used for major evaluations.

> It is reasonable to suppose that such teams will include specialists in instructional technology, specialists in psychometric testing and scaling, specialists in research design and analysis, and specialists in dissemination of information. Curricular innovation is sure to have deep and widespread effect on our society, and we may include the social anthropologist on some evaluation teams. The economist and philosopher have something to offer. Experts will be needed for the study of values of population surveys and content oriented data reeducation techniques. (Stake, 1967)

Taylor and Maguire have pointed to five groups having important opinions on education: spokesmen for society at large, subject matter experts, teachers, parents, and the students themselves. Members of these and other groups are judges who should be heard.

Funding is a major stumbling block to the formation of such a team. Although it is highly unlikely in many situations that such a

team as Stake has suggested would be developed in very many evaluations, that is not sufficient reason to scrap fragmented evaluation. The important thing is to recognize the place in the total system of that part of the evaluation which the person or group is able to do. Findings should be stated with recognition of possible effects of other components of the system. For example, an assessment of the perceptions of teachers of Home Economics as to the techniques they use in teaching and their perceptions of the emphasis placed in the curriculum on these techniques, could be viewed as one small area of a total evaluation of a Home Economics curriculum. If that evaluation were based on the Stake Congruence-Contingency Model, the assessment of the techniques would be a measure of congruence between the Intended Outcomes and the Observed Outcomes.

Sometimes more than one existing model is used in an evaluation. Evaluators borrow from existing models as needed. "For the purpose of developing an evaluation outline, Stake's (1967) model will be used as a basis, but the work of other methodologists will be incorporated as needed." (MacKay and Maguire, p. 19)

It would seem that the selection of a comprehensive model would ensure that biases of vested interests would be avoided. Evaluations may be instigated by any number of interested parties. Since education is of interest to large segments of society, any one of many groups could initiate evaluative proceedings. If it were the local Chamber of Commerce, chances are that they would be interested in financial aspects of the operation. The association of school trustees would be concerned with the preparation of teachers, and the

Teachers' Association would likely want to know what demands were being made on their members re: class loads and preparation time. All of these concerns are legitimate, however, to report that, for instance, thousands of dollars of equipment is standing idle in a school, does not mean that the school system is totally wasteful, or that teachers just cannot be bothered to use it. Other parts of the education system would have to be explored to discover that possibly necessary parts of the equipment have not arrived, or that class periods are too short to utilize the equipment very often, or that the teachers have not been trained to use it, or that they do not know it is there due to a poor communication system. A Gestalt approach is required in which the facts are viewed in context.

APPENDIX 4

Questionnaire

CC

Background Information

Please complete the following questions:

1. Location of school — rural _____ (10,000 population or less) — urban _____ (more than 10,000) — 5

2. Average number of students per Home Economics class. — 6

_____ 6-10 _____ 16-20
_____ 10-12 _____ 20-24
_____ 12-16 _____ more than 24

3. Please list the courses you are teaching in Home Economics or have taught this school year (1976-77) — 7, 8 / 9, 10 / 11, 12 / 13, 14 / 15, 16 / 17, 18

F/Ec Level IFS	FS Level 1,2,3	ML 10,20,30	CT 10,20,30
ML Level 1,2,3	CT Level 1,2,3	_____	FS 10,20,30

4. How many minutes of scheduled preparation time do you have per week? — 19

_____ less than 40 minutes _____ 85-100 minutes
_____ 40-80 minutes _____ more than 120 minutes

Comment (if any) _____

5. Which schedule describes that of your school? — 20

Yearly program _____ Semestered program _____

Other (please explain) _____

6. How many years of experience teaching Home Economics do you have including this year? — 21

_____ 1 year _____ 5 years
_____ 2 years _____ 6-9 years
_____ 3 years _____ 9 or more years
_____ 4 years

7. How many years of training have you completed beyond High School as per salary schedule? — 22

_____ 2 years _____ 4 years
_____ 3 years _____ 5 years or more

8. How long has it been since you qualified for teacher certification? 23

_____ 1 year
_____ 2-4 years
_____ 5-8 years
_____ 8-11 years
_____ 12 years or more

9. How long has it been since you attended evening or summer school courses for credit? 24

_____ 1 year
_____ 2 years
_____ 3 years
_____ 4 years
_____ 5 years
_____ 6-9 years
_____ 10 years or more

10. Major area of specialization at the University. 25

_____ Education majoring in Home Economics
_____ Food Science
_____ Clothing and Textiles
_____ Family Studies
_____ Other (Specify) _____

11. Are you a member of 26

_____ Alberta Home Economics Specialist Council of the ATA?
_____ Alberta Home Economics Association?

In Home Economics only, if you teach mainly Senior High then respond for Senior High. If you teach mainly Junior High then respond for Junior High. 27

Check one: Senior High _____ Junior High _____

In Part (a) please circle the appropriate word to indicate the use you make in your Home Economics classroom of these techniques.

In Part (b) of each question circle the emphasis you feel is given this technique in the curriculum guide and handbook.

Use the Comment space as well, if desired.

(Panel Discussion)

1. (a) I have four to six people, guests or students, present opinions on specific topics so that the students may consider many facets of a situation. 28, 29

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Symposium)

2. (a) I have different persons, guests or students, give brief talks to present various aspects of a topic. 30, 31

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Debate)

3. (a) I have two persons or groups of persons each present a different side of a controversial subject. 32, 33

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

In Part (a) please circle the appropriate word to indicate the use you make in your Home Economics classroom of these techniques.

In Part (b) of each question circle the emphasis you feel is given this technique in the curriculum guide and handbook.

Use the Comment space as well, if desired.

(Programmed Instruction)

4. (a) I provide material which has been arranged in small step sequence, to be pursued by the student at his own rate of learning. 34, 35

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Staff Involvement)

5. (a) I cooperatively plan, carry out and evaluate segments of the program with other staff members within the school. 36, 37

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Written Reports)

6. (a) I require that my Home Economics students research a topic and present their findings in written form. 38, 39

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Oral Reports)

7. (a) I require that my Home Economics students research a topic and present their findings orally. 40, 41

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Higher Order Questioning)

8. (a) The questions I ask in a class discussion cannot be answered with an immediate "Yes" or "No". They require some reflection on the part of the students. 42, 43

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Individual Study)

9. (a) My students work by themselves with my supervision either on teacher-made assignments or on pupil initiated projects, as in individualized learning. 44, 45

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Skits)

10. (a) I have my Home Economics students present mock T.V. broadcasts, plays or radio programs using a prepared script. 46, 47

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Role Playing)

11. (a) I have my Home Economics students act out spontaneously various roles. 48, 49

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Case Study)

12. (a) I use fictitious problems and situations closely related to pupils' experiences and understanding as a basis for encouraging students to explore problems, weigh and evaluate each fact and suggest solutions. 50, 51

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Committee Work)

13. (a) I have two or more students work together on a section of, or on an entire problem or project. 52, 53

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Resource Persons)

14. (a) I have resource people give talks to my Home Economics students. 54, 55

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comments _____

(Interviews)

15. (a) I have my students ask questions of individuals or groups in relation to information for current classwork or special projects as in an interview format. 56, 57

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Teacher Centered Instruction)

16. (a) I provide students with instructions which they are expected to follow in step-wise fashion to a pre-determined goal. 58, 59

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Discovery Learning)

17. (a) I present the students with a problem which they may solve, using the available resources, so that they may discover the most satisfactory solution. 60, 61

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Group Work)

18. (a) I divide my Home Economics classes into a number of small groups to study specific topics. 62, 63

Often Occasionally Seldom Never

Comments _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Teacher Given Demonstrations)

19. (a) I give demonstrations to my Home Economics classes. 64, 65

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Student Given Demonstrations)

20. (a) I have my students give demonstrations to the class. 66, 67

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Pantomime)

21. (a) I have my students portray situations and character roles through actions without words. 68, 69

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Field Trips)

22. (a) I take my class on field trips. 70, 71

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Laboratory Work)

23. (a) My students do laboratory work. 72, 73

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Use of VTR or TV Equipment)

24. (a) I use a video tape recorder or some other television equipment in the teaching of my classes. 74, 75

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Television Programming)

25. (a) I refer to some aspect of television programming (e.g. programs or advertisements) in the teaching of my Home Economics classes. 76, 77

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

(Music)

26. (a) I use music to develop a concept or establish a setting. 78, 79

Often Occasionally Seldom Never

Comment _____

(b) Emphasis in the curriculum guide and handbook.

Considerable Some Little Very Little Don't Know

Comment _____

March 11, 1977

Dear Teacher of Home Economics,

The attached questionnaire is concerned with perceptions of Home Economics teachers in Alberta. This study is concerned specifically with your perceptions of the techniques you use as a professional Home Economics teacher and what you perceive as the techniques emphasized in the curriculum guide. The results of the study will provide data which may be used in the development of future teacher education curricula.

We are particularly desirous of obtaining your responses because your experience in the field will contribute significantly to our understanding of the 'real' situation as regards the teaching of Home Economics in Alberta.

The enclosed questionnaire has been tested with a sampling of Home Economics teachers and we have revised it in order to make it possible for us to obtain all the necessary data while requiring a minimum of your time. Average time required to answer the questionnaire was thirty minutes.

It will be appreciated if you will complete the questionnaire prior to March 25th and return it in the stamped envelope enclosed. We would welcome any comments you have concerning teaching techniques in Home Economics not covered in the questionnaire.

We will be pleased to send you a summary of questionnaire results if you desire.

Thank you in advance for your cooperation.

Laura Mann

Laura Mann

LM/pk
Encl.

March 30, 1977

Dear Teacher of Home Economics,

Recently we sent a questionnaire to a random sample of Junior High Home Economics teachers in Alberta. The survey was an attempt to assess the perceptions of Home Economics teachers at to the teaching techniques they use and the techniques they believe they are expected to use as indicated in the Home Economics curriculum.

Not all questionnaires have been returned. Other phases of this research cannot be carried out until we complete the analysis of the questionnaire data. We would be very appreciative if you could fill out and return the questionnaire as soon as possible.

If you have returned the original survey, please disregard this note. Thank you very much for your assistance.

Yours truly,

Laura Mann

Laura Mann

LM/pk